



ECHO IRELAND

Journal of the
Irish Radio Transmitters Society

December 2011



DXpedition to Kiritimati



T32C story on page 28

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News Bulletins and Readers

Sunday				
Dublin	1100	7.055	SSB	Sean EI7CD, Roland EI4GYB, Ger EI4GXB Francis EI5GOB, George EI7GKB (as Gaeilge) Paddy EI7GK, Danny EI6GS
Wicklow	1130	3.680	SSB	Tony EI5EM, John EI7JG, Frank EI6EF, Liam EI3HK
Dublin	1145	145.525	FM	As 1100
Dublin	1200	3.650	SSB	
Mayo	2000	145.600 - 433.450	FM	70.375 - 50.450
			FM	John EI7IQ, Padraic EI9JA, Jimmy EI2GCB
Tipperary	2030	145.450	FM	Tommy EI2IT, John EI2JB, Andy EI5JF, Eddie EI3FFB
Monday				
Cork	2000	145.750	FM	Vincent EI7HN
Limerick	2000	145.725	FM	Brian EI9AL, Simon EI7ALB, Gerry EI3JU, Ger EI4GXB
Louth	2000	145.675		Peter EI4HX, Thos EI2JD
Tuesday				
Waterford	2130	145.650	FM	Francis EI5GOB
North Cork	2000	430.925	FM	Lisa EI9GSB

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When is my membership due for renewal?

Your membership renewal date is shown on the wrapper in which the newsletter is posted – above the name and address. For those who receive Echo Ireland by electronic distribution, the renewal date is included in the email alert sent when a new issue is published. Members who pay by direct debit will see “(DD)” after the renewal date.

Use **www.irts.ie/renew** to renew your membership at any time; you can also renew at a Rally, or by sending your annual subscription directly to the IRTS Treasurer.

Please renew early to keep our postage and other costs down. Membership is extended by 12 months from the normal renewal date whenever a payment is received.

Joe Ryan, Membership Records Officer
memrecords@irts.ie

From the Editor.....

We extend Christmas greetings to all our readers, contributors and friends.

As another year end approaches, I would like to pay tribute to the many people who contribute to our Newsletter, especially those who do so on a regular basis. Please continue to keep up the good work.

We welcome articles on any radio related subject and if you have an idea for an article, just send it on and a proof will be sent to you before it goes to print.

QRZ.com

QRZ.com is a wonderful facility and is the place to check callsign addresses etc. The only snag is that you have to put your information up there yourself. It is not done automatically.

The site is a great help to those of us who collect QSL cards as it provides all amateurs with the opportunity of stating their policy on QSL cards.

You can indicate if you QSL via the buro and/or direct by mail or whether you use LOTW or EQSL.

It is always disappointing to get a card returned via the bureau stamped "*this station does not use the bureau*".

It is even worse when you never get a reply to a directly mailed card with two dollars included.

A simple statement on QRZ.com that you do not QSL via the bureau would save everybody some time and effort.

Please log on now and sign on or update your information if already up there. It will only take a minute or two.

We all probably know active amateurs who are not Society members. Please advise them to use QRZ to inform their fellow amateurs that they do not use the bureau.

Most QSL buro's are run by volunteers and they all receive large numbers of cards for non-members. IARU policy is that all these cards are returned to the buro of origin and this carries a significant cost in both time and money.

It is bad enough that amateurs do not support the work of IARU; it's even worse that they actually cost us all money.

Please spread the word.

Thankfully, we have had a great response to the appeal for articles and we have had to carry over some until the next issue. This is probably the ideal situation as it means that not everything is left until the last minute and it makes the job much more comfortable.

Please keep it up.

We have omitted the regular DXCC and EQSL listings this time as the time lag between issues has been quite short.

We look forward to lots of updates for the next issue.

Hope to exchange signal reports with many of you on 80m on January 2nd.

73 Dave EI4BZ



Shannon Basin R.C. at SSB Field Day

Top: Pat EI9HX

Bottom: Peader EI5IF



Online Access to Echo Ireland

If you would like to have online access to the complete library of Echo Ireland issues from 2001 onwards and receive new issues of Echo Ireland by way of electronic download instead of in hard copy, please advise the Membership Records Officer.

Include your call sign and email address in the request and send it to:
memrecords@irts.ie

Irish Radio Transmitters Society

**80m Counties Contest
January 2nd 2012
1400-1700**

A Message from IRTS President Paul Martin EI2CA

As 2011 draws to a close I would like to take the opportunity to thank all those who have worked so hard for the Society and our members over the last twelve months. I am always heartened by the great number of people who give generously of their time to help provide the wide extent of Society services.

In addition my thanks to all who work tirelessly at local Club level, putting on theory classes, organising field days and promoting amateur radio in the local community.

The committee always has many projects on their "wish list", constrained only by the need for volunteers to take them on and carry them forward.

If there is an area where you have a particular interest, your help will always be appreciated.

Contact a member of the committee and they will take it from there.

2012 sees the 80th birthday of IRTS and I invite you all to join in the celebrations. Among the events planned for the year is a return of the CQIR contest first held five years ago to celebrate our 75th. This time the event commences at noon on St. Patrick's Day and runs for 24 hours. This is more of a QSO party than contest so even if contests are "not your thing" you should have great fun talking to the expat Irish around the world. Full rules are on the IRTS website.

Santa came early this year with a return of excellent DX conditions on ten and twelve meters and by the time you read this we may even have some trans-Atlantic propagation on six.

These are great bands to experiment with some of the more unusual antennas. I put together a coax fed bobtail curtain for 10m in a couple of hours and have been having great fun beating some of the commercial antennas into the US west



coast with just "a few pieces of bent wire!"

It just remains for me to wish you all a very happy Christmas and lots of good luck, happiness and great DX in the New Year.

Paul, EI2CA

New Contest Group Seeks Operators

Ger McNamara EI4GXB recently announced the formations of new contest team in the mid-West. He issued the following press release.

"I am in the process of building a panel of operators to take part in some of the major Phone contests in 2012. There is already a major DX'er on board from Dublin, and possibly a few more who will travel from the US. To start, we will enter as Multi operator, single radio, and eventually moving to multi op multi transmitter on both CW and Phone, there will be no data modes.

Both experienced and non-experienced contest operators are required, but don't worry if you have no experience as training will be provided. This is a great opportunity to learn about antenna construction, propagation etc.

All interests will be catered for i.e QRP, Low Power and High Power

Please let me know ASAP if you are interested, as a meeting will be planned for all who put their name forward."

73, Ger

www.ei4gxb.com - <http://qrz.com/db/ei4gxb>

EI100T

Titanic Commemoration Station in Cobh

RMS Titanic, the worlds largest passenger ship at the time, sank on her maiden voyage from Southampton to New York, following a collision with an iceberg, at approximately 0245 on the morning of April 15th 1912. 1,517 people lost their lives in the tragedy.

The 100th anniversary of the sinking will be marked by several special event stations at ports associated with the ships maiden voyage.

These include Belfast, Southampton, Cherbourg, Cobh, Cape Race, VO1MCE and a maritime mobile station, VE0MGY, at the site of the sinking.

The call sign EI100T has been issued for the year 2012 and will operate in co-operation with the Cobh Titanic 100 Committee.

The main events will happen over the weekend of April 14/15th and EI100T will also be operated regularly throughout the year.

A special award will be announced before the end of December in conjunction with the other special event locations. Enquiries and QSLs to EI4HQ QTHR.

<http://ei4hq.cloudaccess.net/>

Radio News Deadline Noon on Thursdays

Input to
newsteam@irts.ie

WORLDWIDE

World Wide Contest
Celebrating
IRTS 80th
Anniversary

St Patrick's Day
17th March 2019

12:00 UTC

www.irts.ie

Binary Adder only using Passive Switches, without Diodes or Relays.

An anecdote by Liam EI9DVB.

Back in the early '70s I was involved with the introduction of Colour TV Production to the Bush Ireland Factory in Dublin. This was very successful, reaching an output of about 700 sets per week at its peak.

Shortly after that, the Parent Company required the development of a Multi Standard Colour TV for Shipboard use by Marconi Marine International.

This was also successful, and is possibly a subject for another anecdote.

Automatic Selection.

However, the subject of this story dwells on a particular challenge involving a 'simple' Logic circuit.

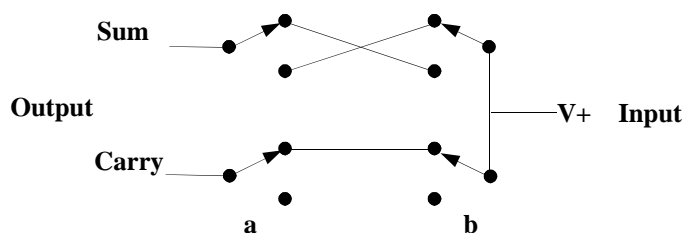
The Analogue Circuits required Automatic detection of PAL, SECAM, NTSC 3.58MHz, NTSC 4.43MHz, Inter-carrier Sound 6.5, 6.0, 5.5, & 4.5 MHz, and of course 625, 525, 50, 60, Hz Line and Frame.

We realised that we needed a couple of 4 bit Shift Registers for the selection process.

This area of Electronics was relatively new to me, so a bit of study was required. (Pun intended!)

As with most books introducing Logic Circuits, the 'AND' & 'EXOR gates' were illustrated using simple switches.

For example:-



Time Travel

By Ganging these two gates a & b, the Truth Table for a 'Half Adder' can be generated in Binary Addition, the EXOR Gate (Top) producing the SUM, and the AND Gate (Bottom) producing the Carry.

One evening over a pint, a colleague suggested, that it would be interesting if you could go back in time to Faraday in the 1800's, and using only what was available then, (i.e. wire wrapped in bandages, a Voltaic Pile, some switches made from Brass and Wood, and a Current indicator like a Galvanometer), to construct a Binary Adder.

We were sure Faraday would have been impressed!

However, that suggestion stuck with me, not going back in time, but making a Binary Adder from passive devices.

Failure.

I was intrigued, that even with my knowledge of Electronics, I could not design a circuit that would satisfy the Full Binary Adder with Carry In and Carry Out functions, without using Diodes or Relays. Why? Because some combination would always allow current to flow back through some tortuous route to short the battery or light an unwanted bulb!

Over a few years of doodling while stuck in an Airports or Hotel rooms, I could never figure out how to design a circuit to satisfy this function. The problem always centred around the 'Carry' function, so I gave up, how frustrating! (Remember, no 'Google' available in the early 70's).

Enlightenment.

By now, unless you know better, you will have fallen into the same trap as I did, - the Carry line should be 'Hi' for a Carry, and Lo for No Carry, Yes? WRONG!

Fast forward now by about 25 years, (21st Century) I was browsing in a second hand book shop in Ashford Co. Wicklow and flicking through an old paperback book entitled "**Number Scales and Computers**" by "F.J.Budden" Published by Longman 1965. I noticed a schematic of a ganged Six Pole Double Throw Switch, wired to a second ganged Six Pole Double Throw Switch, labelled "Symmetric Switched Binary Full Adder" Wow! after all those years of searching, somebody had already solved this mystery.

The 'trick' was, that you needed TWO CARRY LINES 'C0' and 'C1'.

C0 = Carry Zero, Hi if NO CARRY and 'Floating if Carry!
C1 = Carry One, Hi if CARRY and Floating if NO CARRY!

So the Full Adder Circuit (shown below) had to accommodate two Carry lines IN, and generate two Carry lines OUT

Feeling Better.

Well I had to admit to myself that I would never have thought of that solution, It wasn't trivial, so I didn't feel too bad, here is what I read in Budden's book:-

Quote Page 129, "The first diode-less Full Adder was described by Dr. H.M. Cundy in the *Mathematical Gazette* in 1958, and his account is reproduced in a fascinating book, *Mathematical Models* (second Edition, O.U.P.), Cundy and Rollett. The circuit (shown below) was given by C.P. Wormell in the *Mathematical Gazette*, May 1964."

So what seemed to be a 'simple' circuit using passive components, turned out to be quite complicated after all.

The Circuit.

Reproduced below is a Three Bit Binary Adder, the first stage is configured as a Half Adder, (Least Significant Bit on the right) and the successive stages can be wired in series for as many columns as required.

The last stage or (Most Significant Bit) Carry Out (C1) can be wired to a bulb for the end Carry.

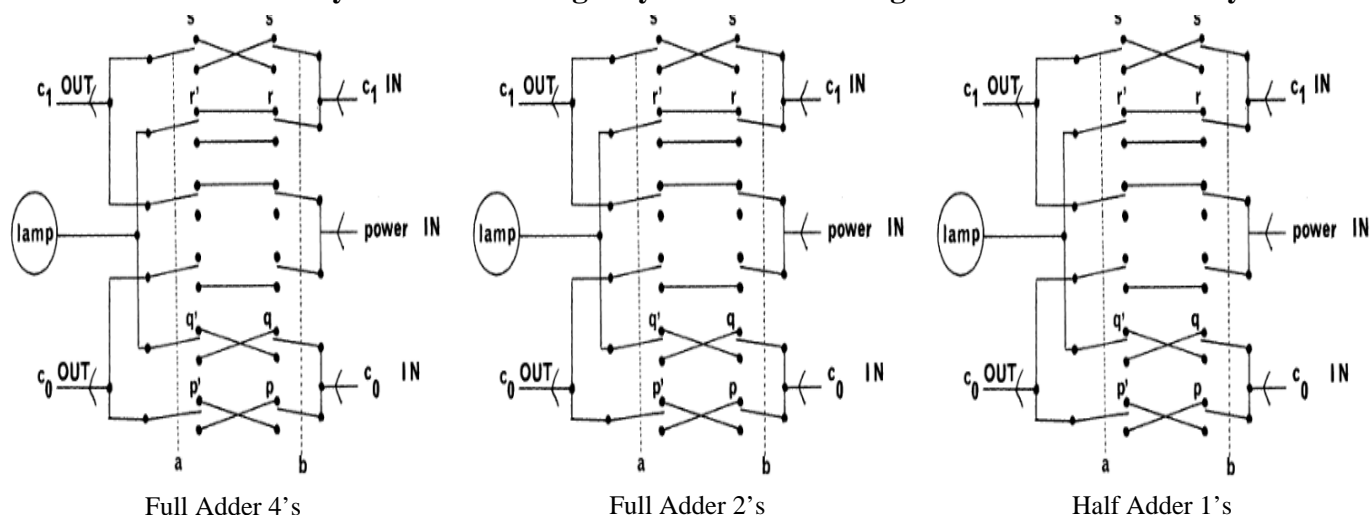
Finally.

I hope you found this as interesting as I did, just from an academic point of view.

Constructing an 8 Bit Adder would require sixteen Six Pole Double Throw Switches, and with the associated wiring, it would make the Project quite expensive and time consuming to construct.

Perhaps Faraday would not have minded!

Three Bit Binary Full Adder using only Passive Switching without Diodes or Relays.



Note 1: In the Half Adder, C1 in, is Floating, and the C0 in, is pulled Hi. (No Carry IN)

Note 2: Wormall later found a solution using only 4 pole ganged switches!

Liam Brady 31/May/2011 EI9DVB.

Email liam.brady@gmail.com



Denis EI6HB pictured with Sam EA8CBV in his shack in Lanzarote

Closed QSL Bureaux

There are 2 new countries that have closed their QSL bureaux, TU .. Cote d'Ivoire and V7.. Marshall Island.

If you work one of these countries then make sure you get the QSL manager or QSL direct.

There is no point in sending them to the outgoing bureau as they will only be returned to you.

New Club in Enniskillen

Enniskillen Amateur Radio Society is a newly formed club in Enniskillen town and as of 2012 their meeting/course venue etc will be the Cathedral Hall, Halls Lane, Enniskillen

Meeting times 2000 - 2200 on first Wednesday of each month.

Details will be updated on their website at www.earsni.co.uk

They have already completed their first Foundation/Intermediate course and four candidates were successful.

IRTS Contests 2012

January 2nd	1400-1700	IRTS 80m Counties Contest
March 17/18th	1200-1200	IRTS CQ-IR Contest
April 9th	1300-1500	IRTS Spring 2m Counties Contest
June 2-3rd	1500-1500	IRTS CW Field Day
June 24th	1400-1700	IRTS 80n Counties Contest
July 7-8th	1400-1400	IRTS VHF/UHF Field Day
August 26th	1300-1500	IRTS Autumn 2m Counties Contest
Sept. 1-2nd	1300-1300	IRTS SSB Field Day

All time UTC

New Internet Gateway

Magherafelt Internet Gateway

Northern Ireland

MIOJPD-L

430.0500 MHz

CTCSS 77Hz

This node is fully operational



HF Happenings

with Anthony Murphy EI2KC

It hasn't been too long since the last instalment of HF Happenings but even in that short space of time there has been a tremendous amount of activity across the HF spectrum, with a major focus on the higher bands and perhaps a late start to the season on 80 metres and top band.

This month though, instead of concentrating largely on what DX has been worked recently, and what expeditions are forthcoming, we will branch out a little bit to speak about a couple of other things in this, the last column of 2011. Hard to believe we're on top of Christmas eh? Let's hope all you hams out there get all the toys and gadgets you asked Santa for, ho ho ho. Or should that be hi hi hi !!! ?

Reverse Beacon Network

A number of amateurs have suggested that the author of this column write something about the Reverse Beacon Network, and how helpful it is to anyone who enjoys the benefits of working the world in CW. Yes, this is a Morse only section of the hobby, so if you're a phone only ham, or a digi freak, skip to the next bit!

Not being massively experienced with the Reverse Beacon Network, this particular operator can only impart what little knowledge he possesses, and how it has benefited his pursuit of DX.

The Reverse Beacon Network is, in simple terms, a widely dispersed network" (hence the name!) of so-called Skimmer stations around the world. These "skimmers" are basically amateur operators who have set up computers connected to wide-band receivers, or in some cases their own transceivers, listening on the ham bands.

The CW signals are automatically decoded by the computer and the result is posted to the Reverse Beacon Network website at www.reversebeacon.net.

So, in essence, it is an automatic DX cluster. A CW operator who begins to CQ on 20 metres can be spotted automatically on the network within 30 seconds by skimmer stations in other parts of the world. Provided, of course, that the skimmer station can actually hear the CW signal.

CW Skimmer is a software package, available from Alex Shovkoplyas, VE3NEA, at www.DXAtlas.com. A 30-day full-featured trial version of release 1.1 is available free of charge. Combined with your transceiver, or a software defined radio, CW Skimmer listens to the entire swath of spectrum it can hear, identifies Morse signals, and decodes them all. The beauty of the Reverse Beacon Network website is that the results of what skimmer stations around the world are hearing are posted to the website in real time, therefore enabling hams around the world to "see" who is calling CQ within moments of that CQ starting.

What is the advantage of this? Well, there is a very real advantage because the spots are posted automatically, by software, not by humans. The normal DX Clusters, for example DX Summit and DX Scape, rely on manual human input. In other

words, if EI2KC hears VE7XYZ CQing on 14.005, he might manually "spot" the VE7 on the cluster. But if nobody spots the VE7 he could be calling away without the world knowing he is there.

Only those who stumble across him will call back at him.

On the Reverse Beacon Network, however, any skimmer station that hears "CQ CQ CQ de VE7XYZ VE7XYZ VE7XZY PSE K" will automatically spot him/her on the network website. And, to make it even more exciting, the actual frequency he/she is CQing on is spotted also, along with received signal strength, given as SNR, or Signal to Noise Ratio. On top of all this the speed of the call is given in WPM, words per minute and the time of the CQ is posted also.

For anyone interested in nabbing DX or rare entities on CW, the Reverse Beacon Network should become an essential aid. Yes, there are the old fashioned operators who prefer to just spin the VFO and listen to what's there. It is certainly true that computers have helped to revolutionise the hobby, but this is not to everyone's liking.

Some would argue that clusters and online QSL sites like ARRL's Logbook of the World have made it much easier for hams to achieve DXCC. Some prefer the time honoured tradition of working what you can hear. Others are hooked on clusters and computers are an essential part of their shack.

The Reverse Beacon Network website allows you to filter the results. You can ask it only to show you who is calling CQ on the 20 metre band. Or you can instruct the filter to show you only stations calling from Asia. Or maybe you're looking to work a particular entity? Yes, you can even filter the results to show you only stations calling from a particular DXCC, such as VK or maybe VP5.

It really is very flexible.

Another major advantage of the system arises when an operator wants to compare signals from different antennas, or maybe using different power.

You could call CQ using 50 watts and watch the signal to noise reports on the network, and then crank up the linear to 400 watts and see how much, if any, the signal strengths improve. You can filter the results to show only your own callsign. It's that good.

Just this morning, for instance, with the beam pointing north-east for Asia, this particular amateur called CQ on 28MHz using about 350 watts.

The image below shows the results from the skimmer stations which were hearing my CQ, including one in Western Australia.

SV8RV	🇮🇹 EI2KC	28016.3	CQ [LoTW]	18 dB	26 wpm	0835z 28 Nov
RZ3DVP	🇮🇹 EI2KC	28016.0	CQ [LoTW]	25 dB	26 wpm	0834z 28 Nov
SV8RV	🇮🇹 EI2KC	28016.3	CQ [LoTW]	15 dB	26 wpm	0824z 28 Nov
RZ3DVP	🇮🇹 EI2KC	28016.1	CQ [LoTW]	29 dB	26 wpm	0824z 28 Nov
VK6IA	🇮🇹 EI2KC	28016.0	CQ [LoTW]	7 dB	26 wpm	0816z 28 Nov
RZ3DVP	🇮🇹 EI2KC	28016.0	CQ [LoTW]	25 dB	26 wpm	0814z 28 Nov
GW8IZR	🇮🇹 EI2KC	28016.1	CQ [LoTW]	6 dB	26 wpm	0814z 28 Nov
RU9CZD	🇮🇹 EI2KC	28016.2	CQ [LoTW]	26 dB	26 wpm	0813z 28 Nov

(Continued on page 9)

(Continued from page 8)

As stated above the network is also very handy for finding the rare DX. Maybe you want to work a DXpedition and would like to know where they are calling?

Right now the T2T DXpedition is active from Tuvalu in the Pacific.

On the “main” page of the network website, <http://www.reversebeacon.net/main.php>, you should see, just above the spots, a link that says “search spot by callsign” (highlighted in picture below).

REVERSE BEACON NETWORK













welcome | main | dx spots | skimmers | downloads | about | contact us

show/hide my last filters

no filter selected, showing all spots

search spot by callsign

rows to show: 100

de	dx	freq	cq/dx	snr	speed	time
WE4S	 WA2JXX	14060.0	CQ	23 dB	16 wpm	2115z 28 Nov
K3LR	 DL2BHM	7021.1	CQ	10 dB	22 wpm	2115z 28 Nov
K3LR	 WA2JXX	14060.0	CQ	36 dB	17 wpm	2115z 28 Nov
NY3A	 G6PZ/MM	28025.1	CQ	19 dB	31 wpm	2115z 28 Nov
WZ7I	 LW3DG	28003.1	CQ	15 dB	20 wpm	2115z 28 Nov
H4ZR	 G6PZ/MM	28025.0	CQ	14 dB	31 wpm	2115z 28 Nov
K3LR	 WY4R	7027.1	CQ	28 dB	23 wpm	2115z 28 Nov
W0MU	 G6PZ/MM	28024.9	CQ	21 dB	31 wpm	2115z 28 Nov
K3MM	 LW3DG	28003.1	CQ	16 dB	20 wpm	2115z 28 Nov
WA7LHW	 G6PZ/MM	28025.0	CQ	25 dB	31 wpm	2115z 28 Nov
K1TTT	 G6PZ/MM	28025.0	CQ	16 dB	31 wpm	2115z 28 Nov
K8ND	 G6PZ/MM	28025.1	CQ	33 dB	30 wpm	2115z 28 Nov

Clicking this link brings up a search box (shown below):

REVERSE BEACON NETWORK

welcome | main | dx spots | skimmers | downloads | about | contact us

show/hide my last filters

no filter selected, showing all spots


search spot by callsign

rows to show: 100

search callsign:

☒ DX ☐ DE

wildcard * allowed

de	dx	freq	cq/dx	snr	speed	time
DK9IP	 OZ3NP	3512.6	CQ	17 dB	22 wpm	2117z 28 Nov
SV8RV	 OZ3NP	3512.6	CQ	5 dB	23 wpm	2117z 28 Nov
WZ7I	 W4MQC	7028.3	CQ	19 dB	23 wpm	2117z 28 Nov

Where it says “search callsign” just enter the call of the particular station you wish to work in the box to the right and then click the “search” button. In this case, we want to know where T2T might be active, so just type T2T into the box and click “search”. On this particular occasion we see that T2T is active on 15 metres CW, on 21.010, although only being heard by North American skimmers and probably inaudible in Europe. See pic 4 below.

REVERSE BEACON NETWORK











welcome | main | dx spots | skimmers | downloads | about | contact us

show/hide my last filters

showing spots for DX call: T2T

search spot by callsign

rows to show: 100

de	dx	freq	cq/dx	snr	speed	time
K8ND	 T2T	21010.1	CQ	21 dB	31 wpm	2109z 28 Nov
NU6O	 T2T	21010.0	CQ	4 dB	29 wpm	2108z 28 Nov
NC7J	 T2T	21009.9	CQ	5 dB	31 wpm	2107z 28 Nov
KH6LC	 T2T	21010.1	CQ	14 dB	31 wpm	2107z 28 Nov
WA7LHW	 T2T	21010.0	CQ	10 dB	30 wpm	2107z 28 Nov
WE4S	 T2T	21010.0	CQ	9 dB	30 wpm	2103z 28 Nov
N7TR	 T2T	21010.0	CQ	17 dB	30 wpm	2102z 28 Nov
WZ7I	 T2T	21010.0	CQ	4 dB	30 wpm	2101z 28 Nov
N6TV	 T2T	21010.0	CQ	7 dB	30 wpm	2101z 28 Nov
K8ND	 T2T	21010.1	CQ	31 dB	31 wpm	2059z 28 Nov

I hope this brief little jaunt into the vagaries of the Reverse Beacon Network has been of some interest to you. It certainly has been of major assistance in this shack. It is nice to set up a filter for, say, Oceania, and then watch the VKs and ZLs and even more exotic prefixes pop up from time to time.

And remember, because the network is automatic, you are at an advantage over those hams who use only the traditional clusters, as they have to wait until another ham physically spots the DX station before it shows up on the cluster!

In this way it is possible, sometimes, to beat the pile-up because if you're quick enough, you can get in just after the DX station has started calling, and just before he gets picked up on the other clusters.

If you have any further questions, and if I can answer them, I would gladly receive any queries by email at hamradioireland@gmail.com

Recent DX:

Conditions on HF continue to be excellent as we head into December. 10 metres has been open every day, usually from 0730 onwards. This particular amateur hasn't been out of bed earlier than that to find out when it actually opens Hi Hi !!

EI stations have been reporting very limited success with the above mentioned T2T Tuvalu DXpedition and in general Irish hams have found it difficult to hear them. This is not so for some of the other Pacific DXpeditions recently, in particular T32C, Christmas Island, of which you will read more from Paul EI5DI. Most of us were able to put T32C into the log on a number of bands, something we were very grateful for. ZK2V on Niue has been much stronger than T2T and made it into logs across Echo India.

KH2 and KH0, Guam and Northern Marianas, have been worked in EI on 20 metres, 15 metres and even 10 metres. E51NOU and E51MAN were calls used by the same operator, Bill N7OU, working from South Cook Islands and North Cook Islands respectively. A number of EI DXers have put both E5-S and E5-N into the log, many as new DXCCs.

Conditions have been so good that E5 has been worked on 15m, 12m and 10m into EI.

Contributions from two Irish DXers, Declan Craig EI6FR and Don Brennan EI6IL are given below as a good example of the sort of DX being picked up in Ireland recently.

Declan EI6FR reports the following: “Been mainly QRV on 10m as it's been so good, worked the E51NOU, plenty of KH6's and the various African expeditions. Also been enjoying 40m which has been in good shape in the early mornings to the Pacific.

“Was QRV as single band operator in the CQWWSSB on 15m, ended up with 134 DXCC and 35 zones. Interesting thing was that DXCC was achieved on 15m within 7 hours, first QSO at 0825z and DXCC being got at 1515z. This with a Force 13 C3S Yagi lowered to 25 feet because of the storms.”

“The DX disease has hit CW contesting also, continuous calling when trying to work a station, but then I suppose it is a ‘competition’. Only fly in the ointment last few weeks has been the appearance of very bad noise which has rendered 80m just about usable with attenuation in, 160m totally unusable and worst of all completely wiped out longwave listening, so book

(Continued on page 10)

(Continued from page 9)

at bedtime on Radio 4 up the swanee. Noise seems to be coming from an Eircom telephone line crossing my driveway, I'll try get it sorted by fair means or foul Hii"

Don EI6IL sent in an extract of his log which helps to sum up how excellent the conditions have been of late. Here are the highlights: 9V1SV 17m SSB, XX9LT 20m SSB, 4W6A 20m SSB, T88TW 20m SSB, WH2X 20m SSB, 3D2R 15m CW, 6O0M 17m CW, YJ0VK 17m CW, 5R8UI 10m CW, HH2JR 20m SSB, 9N1AA 17m CW, FO4BM 10m SSB, TX3T 12m CW, E51NOU 12m CW, VK9CX 20m SSB, 3DA0HC 17m SSB, 3XY1D 20m CW, TX7M 12m CW, ZK2V 10m CW, XV1X 10m CW, TU2T 17m CW, 7Q7GM 20m CW, CE0Y/LA5UF 10m CW, 5T0JL 17m CW, KH0O 20m SSB, T2T 15m CW, 8J1RL 20m CW, 9N7MD 40m CW, VP2MOR 20m CW, 9L0W 10m CW, V31AO 15m.

Congratulations Don on a very impressive logbook. Well deserved. Keep up the good work.

Forthcoming DXpeditions

5V – Togo

Arnould, F4FOO, will be active as 5V7MA from Togo between December 19th and January 4th. Activity will be limited to his free time on 20-10 meters SSB only. QSL via his home callsign.

CY0, Sable Island

Alan, VE1AWW, has returned to Sable Island again and is expecting to stay until the end of the year. Activity will be limited to his spare time using just a vertical and dipole. QSL via his home callsign.

HH2, Haiti

Pierre, HB9AMO, will once again be active as HH2/HB9AMO from Haiti between November 26th and January 8th, 2012. Activity will be holiday style (local evenings and weekends) and only on CW using a TS-50 into a wire antenna and tuner. QSL via PA7FM.

For more details, updates, pictures of his previous operations, and an online log search, visit: <http://www.hhhb9amo.pa7fm.nl>

KG4, Guantanamo Bay

Norman, AH0AJ, is now active as KG4AJ from Guantanamo Bay for the next two years. QSL via his home callsign.

9X, Rwanda

Carl, SM6CPY will be active as 9X0PY from Rwanda between December 24th and January 7th, 2012.

Activity will be holiday style on all bands but with a focus on the higher bands.

QSL via his home callsign, direct or by the Bureau.

HK0NA, Malpelo

Recently three US members (K4UEE, N4GRN and W6IZT) of the Malpelo 2012 DXpedition flew to Cartagena, Colombia and met with six of their Colombian counterparts.

The purpose of the two day meeting was to make some critical decisions about the upcoming DXpedition to Malpelo Island.

Also, checklists and inventories were finalized and all team members' responsibilities were assigned.

Since it is highly unlikely that the various Colombian authorities will permit another DXpedition to Malpelo anytime soon; a

decision was made to extend the DXpedition to 16-17 days from the previous 12-14 day plan.

The approximate dates of operations will be January 21, 2012 through February 5/6, 2012.

A52SV, Bhutan

Shinya Hirano JA2PSV has been working in Thimpu, Bhutan since October 2011.

He has acquired the callsign A52SV and will be in Thimpu until September 2013, active during his spare time. QSL to LoTW and OK via bureau to JA2PSV.

That's all for this, the last HF Happenings of 2011.

May I take this opportunity to wish you all a very Happy Christmas and a Happy New Year.

Let us hope, above all, that conditions continue to remain excellent on HF, and that the winter storms don't batter our antenna systems into oblivion.

Until 2012, 73 es GL es GD DX, de EI2KC .

Good News on 500 kHz

During the meeting of the CEPT WRC-12 Conference Preparatory Group held in Bucharest between November 1st-4th 2011 a European Common Proposal (ECP) was agreed.

This ECP represents the block vote of 48 administrations and was passed without dissent. It proposes an allocation to the amateur service between 472-480 kHz on a secondary basis with a maximum power limit of 5W eirp.

This ECP will now be forwarded to the ITU as a contribution from CEPT to WRC-12.

The IARU would like to thank the European Member Societies who helped to influence their national administrations in this matter.

This is an important step in the IARU efforts to secure a worldwide secondary allocation to the amateur service in the region of 500 kHz at WRC-12



Clifford EI5FQB and Charlene at the Mayo Rally

Mayo Rally 2011

The annual Mayo Rally held in The Welcome Inn in Castlebar on Sunday November 20th last was again another triumph for the Mayo Radio Experimenters Network.

There are no other rally organisers who put in the amount of preparation and work that the Mayo crew do.

The physical set up is outstanding and despite the fact that the venue is on the first floor of the hotel, traders had no complaints about the lack of manpower to get their equipment in and out.

Other rally organisers should travel for lessons.

The accommodation offer at the hotel was great value, B & B together with the main course from the evening meal menu for €0.00.

Two lectures were scheduled for the Saturday evening and both were very well supported.

Pat EI2HX took the floor at 1900 and gave a an entertaining talk on ATV. He brought along a truck load of equipment from connectors to receiver and transmitter kits, assembled ATV transceivers and a wide range of aerials that are used on the ATV bands.

We all now know a good bit more on what's involved in ATV after Pat's presentation.

Dave Deane EI9FBB was on stage at 2100 with a powerpoint presentation on the ARRL's Log Book of The World (LOTW).

The main benefit of LOTW is that it en-

ables you to claim QSO credits for the DXCC and WAS awards without the expense and time delay of the normal paper QSL.

Several laptops were produced after the talk and new application to join LOTW were initiated.

Following the talks, many adjourned to the high stools and the discussions went on until the early hours.

The doors to the rally opened at 1100 and there was quite a queue waiting.

A feature of the Mayo rally is the bring and buy and other rally organisers would do well to duplicate the Mayo effort.

All the usual traders were present and seemed to be doing good business all day. There was a raffle on the door tickets and the lucky winner of a CCTV camera was Kenneth Malone from Roscommon.

The hotel offered excellent service with good food available and tea and coffee available for the early morning visitors, something not always available at other venues.

It is very annoying to arrive after an early morning start and a long drive to be told that nothing is available until the bar opens at 1230.

Congratulation to Padraic Baynes EI9JA and his team for another great event.



Galway visitors at the Rally: Enda EI2II, Larry EI9CN, Bill EI5CL, Paul EI6EXB, Aengus EI4AAB, Stan EI7CGB, Damian EI2HG



Bill GI3MMF and Frank GI4MKB



Dave Deane EI9FBB, EI's only DXCC card checker busy at work.



IRTS - Pat EI2HX and Peter EI4HX



Axel EI8JX with John EI7BA



Patrick EI2KE and Padraic EI5IX



Jim EI2HJB with Tony EI4DIB

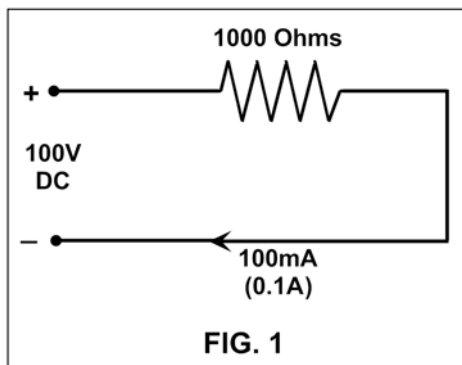
Customising and Re-scaling Versatile Moving-coil Meters

Tony Breathnach EI5EM

Many surplus moving-coil meters are available at junk sales, most at bargain prices. Most will have a calibrated scale attached. For example, you may see engraved on the scale FSD = 10mA. This specification simply means that a current of 10mA flowing through the meter coil will cause the pointer to deflect to the end of the scale (Full Scale Deflection). However these meters are versatile and can easily be adapted to measure other current values, voltages and resistances, as explained below.

Some meters may also be pre-engraved to show Volts etc. However, what is important is the FSD specification (current), as a new scale can be added. I have often used correcting fluid (Tippex) to hide the original scale figures and added in my own carefully with a pencil or thin ink marker.

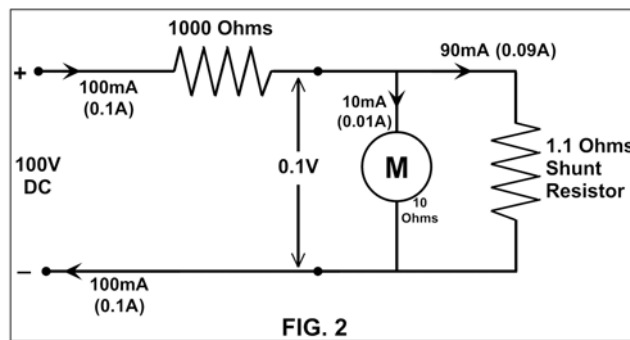
In the examples that follow we will assume that the resistance of the coil in the meter is 10 Ohms.



Measuring Currents (Ammeter)

If we want to scale the meter to read 0.1 Amperes (100mA) instead of 10mA at FSD. Let us recap on Ohm's Law and suppose we have a DC voltage of 100V and a resistance of 1000 Ohms in circuit as in Fig 1. The current flowing in the circuit will be 0.1 Amperes ($I = V/R$). If we tried to measure this current using our sample meter the coil would probably burn out as the current flow would be a ten times too large and the pointer would crash against the stop at the end of the scale.

Our sample meter cannot tolerate much more than the specified 10mA current. Therefore, we have to divert the excess 90mA elsewhere so that only 10mA flows through the meter coil. Adding a



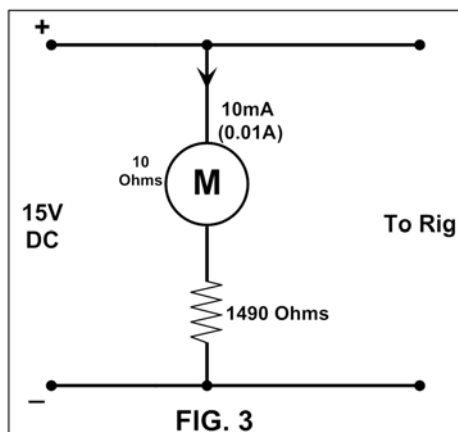
shunt resistor of correct value across the meter coil can achieve this. So let us now calculate the shunt resistor value.

Again reverting to Ohm's Law we can calculate the voltage across the meter terminals that will allow 10mA to flow through the coil. ($V = I \times R$). We know that the current is 10mA or 0.01 Amperes and the resistance of the coil is 10 Ohms. Therefore the voltage which will cause the FSD of the meter is 0.1 Volts ($V = 0.01 \times 10$).

Look at the measuring circuit in Fig. 2. The 0.1 Volts will also appear across the shunt resistor which is to carry the 90mA or 0.09 Amperes. We now want to calculate the value of that resistor. We know the voltage 0.1 and the current 0.09A. Again, Ohm's Law tells us that the resistance will be 0.1 divided by 0.09 ($R = V/I$) or 1.1 Ohms.

The introduction of the meter and shunt resistance into the circuit will cause a slight inaccuracy to our reading but this is negligible.

It must be remembered that a meter measuring current must be inserted in series with the circuit and never in



parallel across it.

Measuring Voltages (Voltmeter)

In this example we will use the same meter to measure voltage. Suppose we want to monitor the voltage of a power supply to a transmitter that has a specification of 12 Volts.

We could set the FSD to indicate 12 Volts but we will allow some leeway and set our FSD to 15 Volts. Fig. 3 shows how this is done.

We use a voltage dropper resistance in series with the meter coil. We know from a previous calculation that only 0.1 Volts can appear across the meter coil at FSD. If we allowed the full 15 Volts the meter would as before suffer damage. The voltage dropper resistance must have a drop of 14.9 Volts across it at FSD and the meter no more than 0.1 Volts.

We know that 0.01 Amperes (10mA) is the required FSD current for the meter. This current will also flow through the dropper resistor.

Therefore the value of resistor will be 1490 Ohms. ($R = 14.9/0.01$).

It will also be noted that the voltage measurement is made in parallel with the circuit whereas current is measured in series. In both cases the scales will be linear (half the voltage or current will deflect the pointer to mid-point on the scale).

Measuring Resistance (Ohm-meter)

Measuring resistances is not as simple. However, we will explore briefly how this is done using the same moving coil meter.

We need a voltage source in this case to drive the current through the circuit as in Fig. 4. In this case the deflection will be opposite to before. Zero ohms will cause FSD and higher resistances will cause less deflection. Our example uses a 9-Volt battery.

In commercial Ohm-meters a calibrating (zero adjust) potentiometer is usually included to compensate for battery voltage changes over time allowing

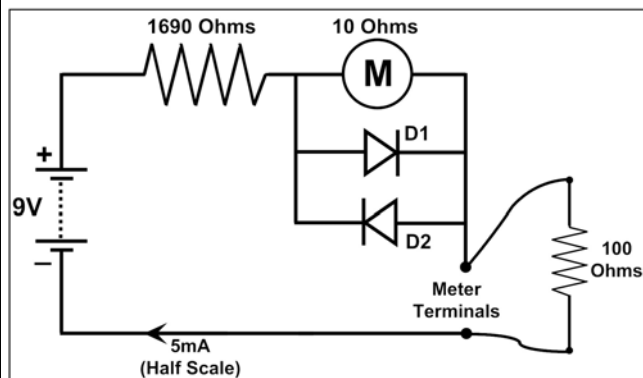


FIG. 4

Conclusion

You have seen from the examples given how versatile moving coil meters can be and how they can be adapted and customised for projects such as power supplies. In general, the lower the current required for meter FSD the more sensitive it will be and

adjustment of FSD when both meter leads are shorted (touched) together. However, for simplicity this has not been shown in Fig. 4.

Suppose we want a half-scale reading to indicate 100 Ohms on the meter. When a 100 Ohm resistor is inserted in circuit we want 5mA to flow through the meter. Again Ohm's Law applies ($I = V/R$) and the total resistance of the circuit will be 1800 Ohms (including meter coil, dropper resistance, and resistor to be measured). The dropper resistor value would be 1690 Ohms ($1800 - 10 - 100$).

We have established that 100 Ohms will deflect the pointer to the mid-point of the scale. But what happens if we measure a 200 ohm resistance? Where will the pointer come to rest? In this instance the total resistance in the circuit will be $1690 + 200 + 10$ Ohms = 1900 Ohms and the corresponding current 4.7 mA. The pointer will come to rest at almost the same mid-point for measuring 200 Ohms as for 100 Ohms. The scale is not linear and higher resistance readings become more bunched together making accurate readings difficult. This is overcome by having several selectable resistance scales.

the more accurate the measurement, as the meter will have less effect as it will draw less current from the circuit being measured.

Moving coil meters are sensitive delicate devices and do not tolerate currents much above their specified FSD. Care has to be exercised in their use especially ensuring that a meter configured for measuring current is inserted into the relevant circuit in series and not in parallel across a voltage source.

In commercial multimeters protection of the meter is usually incorporated by inclusion of a fuse or by placing two diodes across the coil as shown in Fig. 4. Germanium diodes are normally used as they allow a maximum of about 0.2 Volts across the meter coil and offer some protection whereas silicon diodes allow about 0.6 Volts.

I love old meters recovered from surplus equipment especially from the WWII era. They look great and provide a classical finish to any home-brew project.

Best 73 de Tony (EI5EM)

ei5em@eircom.net

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IOTA

50th Anniversary Marathon

The year 2014 marks the 50th anniversary of the launch of the Islands On The Air (IOTA) Programme by British SWL Geoff Watts, BRS-3129.

To celebrate the occasion, the RSGB IOTA Manager and Committee announce an exciting activity period in which all licensed amateurs world-wide are invited to participate.

For a two-year period during 2012 and 2013, IOTA chasers are encouraged to contact as many different IOTA groups as possible, and IOTA activators to play their part by operating from as many groups as possible, with special emphasis on the less-frequently activated ones.

The points system adopted rewards 'Activators' with higher scores for activating the rarer IOTA groups. Certificates and awards will be available to both 'Chasers' and 'Activators' to reflect attainment of graduated bands of performance.

The challenge provides a level playing field for everyone, whether they are complete newcomers to IOTA or are holders of the prestigious IOTA 1000 Islands Trophy, because everyone starts with a clean slate on 1 January 2012.

Furthermore, the long time scale of the challenge means that, should a participant miss a DXpedition to an island, there is a chance that he/she may be able to pick it up at a later date if the group is activated again during the 50th Anniversary Marathon period or, failing that, to replace it with another counter from the 1100 activated groups.

Prizes will be awarded to the highest-scoring individuals in both the 'Chasers' and 'Activators' sections and these will, if circumstances allow, be presented during the IOTA 50th Anniversary celebrations at the RSGB Convention in 2014. Certificates will be available to other participants who reach the specified grade levels.

The rules are available on:
<http://www.gkma3.dsl.pipex.com/>

Echo Ireland Input

All input for inclusion in Echo Ireland should be sent to:

Dave Moore EI4BZ,
Dooneen, Carrigtwohill, Co. Cork.

ei4bz@eircom.net 087-6290574

This is a story about an IOTA expedition to the remote islands of St. Kilda and Monachs that I was proud to be a part of. It was a fantastic expedition where I met great people who enjoyed the experience together with me and who I now call friends. Going to these trips is one great way to discover the world and yourself.

Stan, EI6DX

When a DXpedition ends, the question is often asked "Where do we go next?". With MSØINT 2011, the question could easily be "Where do we start"?!

In writing this piece, I knew well in advance that it would be long and needed a starting point; so let's begin on June 13, 2011.

That morning I arrived in Benbecula, Outer Hebrides three full days in advance of MSØINT beginning activities. Lots of things needed done before the team assembled, namely collecting a mountain of gear stored at the local community hall in Berneray Isle, filling petrol containers, getting familiar with the roads (and passing places) all over the Uists.



Speaking of roads, to say the 16 seat hire bus we had was antiquated is an understatement, although in fairness, it did get us to all intended destinations - with gear stored at the back end of the bus, we did look like a group of New Age travelers!

By June 14th, Vincent F4BKV arrived in Benbecula, fresh from his mini GM-IOTA tour (EU012, EU009, EU123) which would coincide with joining team MSØINT.

Immediately upon arrival, he and I set off to South Uist Island (EU-010) and activated from a superb spot with the sea almost under us.

200+ QSO's were quickly made from here before heading to North Uist and finally ending the days activity as MM0NDX/P & MM/F4BKV from our base on Berneray isle.

Vincent briefly activated Isle of Benbecula on Wednesday June 15th as we

MSØINT – IOTA DXpedition: EU-010, EU-059 & EU-111

By Col, MM0NDX

waited on the plane arriving with the rest of the team. Simon IZ7ATN and his XYL Monica were to arrive later that day, so after meeting and greeting, EA3NT, EA3OR, EA5KA, EI6DX, F4BKV and MM0NDX all set off to Baleshare, (EU010) where various MM/ home call-signs were used.



Although part of the vast EU-010 group, Baleshare as a separate island, has not been activated often. The CW pileup especially reflected this.

Later that day, we returned to the airport and collected Simon & Monica. Next stop was the supermarket where we'd individually stock up on groceries for the upcoming EU111 and EU059 activations.

MM/IZ7ATN and MM/EI6DX were both

active that evening from the hostel on Berneray Isle, our base before departing for Monachs the following day.

The vessel to Monachs (EU111) was Lady Anne, a converted fishing boat. Nick, the skipper, was the man to take us to EU111. This particular voyage was rough as we fought against a spring tide, 5m swell and exposed sandbanks.

In talking to Nick, he confirmed that was one of the worst passages he had ever done. Sick bags testified to that!

After 90 minutes at sea, the Monachs and the Old Schoolhouse there, came into view. Thankfully, the bay where we landed was sheltered from a roaring Atlantic.

Unloading all our equipment, food and personal items was time consuming.



Indeed, one of the two tenders used to ferry our gear to the beach started to capsize with Ramon EA3OR in it, primarily due to the skipper over-loading it and the crewman's inexperience in rowing ashore. A near disaster with the generator and radios was averted as the tender slowly sunk. Four of us rushed out knee deep to retrieve these important items before the sea swallowed them!

Once everything was transported to the beach, and with the weather being glorious, we decided to quickly erect a HF antenna and get on air.

Simon IZ7ATN started on 10m as MSØINT/P, then onto 20m. Pileups were good and steady.

The plan was to base ourselves at the same QTH as GS3PYE/P had done one year prior.

This we did, but no way would we sleep

(Continued on page 15)

(Continued from page 14)

in the old schoolhouse such was the utterly ridiculous state it had been left in by passing fishermen.

Tents outside, stations inside. We operated 20 and 40m from EU111. Generator issues caused huge problems for the team and, in hindsight, we did extremely well to make over 2,000 QSO's from here in under 18 hours. One of the sponsored IC7000's also had a display problem, fortunately back up rigs were taken. We were scheduled to leave Monachs at 0900 local next day.

On Friday, June 17th, Seumas Morrison of Sea Harris boat charters collected us on the Enchanted Isle, a 42ft Interceptor vessel. Let's be charitable and say the difference between landing on Monachs to leaving was like night and day, such was the smoothness of Seumas' operation. Hundreds of curious seals watched our every movement as we departed the scene - wonderful moments captured by the official team photographer, Monica.

From EU111 to EU059 takes just under three hours at a steady 18 knots. The weather was fantastic to St Kilda, but changed rapidly as we approached the magnificent sea stacks and the towering Boreray (3km north of Hirta, the main island in the chain).

Squally showers pounded the sea as we landed in a south easterly wind; the "worst kind" of wind direction for a Hirta landing we were told. Nevertheless, we landed quickly, in heavy rain, with all gear intact and on the pier ready for transportation some 250m above.

It is at this point, I can't thank enough the people involved in permitting us to:

- 1) operate at height from Hirta,
- 2) assist in transporting all kit to the top - you know who you are!

At 250m above Village Bay, the view is spectacular, but only on a good, clear day. We all gathered together in a howling wind and rain, probably all thinking the same: "Why do we do these IOTAs"?



Team morale comes to the fore in these situations, and it was high.

Pitching tents, to keep items dry, was a challenge. Hats off (literally) to Raul EA5KA and Ramon EA3OR in quickly erecting the first tent, weighted down by luggage just to keep it in place.

The large tunnel tent, to be used as the operating shack, with room for eight people, proved extremely difficult to erect on the plateau of Mullach Sgar.

Initially, we attempted to pitch it on a field deemed suitable by NTS, but this was an accident waiting to happen. Had we not decided to move the tent behind the outbuilding of the now seemingly disused Ministry of Defense second radar base, I firmly believe it would have flown. Indeed, my own tent, when pitching, did just this! Thankfully, Simon and Monica brought a spare tent!

Once the shack tent was finally erected and secured, we got to work in setting up stations, antennas and our own sleeping tents.

In a move to surprise IOTA chasers, we decided to open proceedings on 30m CW, and not the usual 14260 IOTA frequency. Christian EA3NT started up from EU059. Axel, DL6KVA was first in the log.

After a few CQ's, it was apparent MSØINT appeared on the DX cluster and the fun then commenced.

Soon 17, 20 and 30m were all on air.

It should be pointed out that although the tent appeared to be sheltered a little, it was still very much "bouncing" in the cold south easterly gale - it was difficult operating conditions in more ways than one. Working throughout the night, 1,000+ QSO's were quickly attained.

Saturday, June 18th was a truly beautiful day. Sunny, warm, clear. We were informed by island staff to be on the lookout for blue whales in the ocean below. Operations continued with very many contacts being logged.

JA were being easily worked on 17 & 20m. Out with Rockall EU-189, we knew Japanese IOTA chasers needed St Kilda next on their most wanted list. It was very pleasing to see so many calls enter the logs. Additionally, NA/SA chasers were being worked with great aplomb - if heard, you were worked.

The 40 and 80m vertical was installed in the afternoon, same with the 6m Yagi. On 50MHz, mainly south EU was logged - conditions never good enough to contact more from this rare counter.

An excellent run to NA/SA ensued on 20m that evening.



Reference must be made to the fact our main generator, similar to on Monachs, stopped working. Thankfully, our back-up generator performed admirably.

Suddenly, and with no warning, the weather changed rapidly - again the wind picked up, like a carbon copy of the previous night. It was a relentless bombardment, captured on video for posterity!

How the shack tent survived, we'll never know. A few snapped poles inside confirmed the wind was more than strong. The 30m vertical was downed - large rocks used in tying antenna ropes were being tossed to one side, and this was a summer gale!

I can only imagine the severe winter storms battering St Kilda.

Despite the often adverse weather, we continued at a good rate working the world. EU059 was becoming less wanted for many - the real reason behind this IOTA expedition.

During the peak of operations three HF stations and 6m were on air.

The scenery and wildlife on Hirta, St Kilda confirms why the archipelago is only one of 25 UNESCO listed locations around the world for natural beauty and heritage. Lord Howe island, including Balls Pyramid, to put in context, is one of the other listed locations. Monica took some memorable photos for sure.

The QSL card depicts her work.

Sunday, June 19th. With thousands of QSO's already in the log, we continue hard to work all stations calling us.

Propagation was mixed; not poor, not great is one way of describing it.

However, this was the one day the wind didn't arrive - and very grateful we were too!

40 & 80m was prime focus during the evening, with 20 & 17 also going well. PSK31, like the previous day, was also in use by Vincent F4BKV. We had plans to tear down the station gradually during Sunday as we had to leave the island by 0900 latest next morning.

(Continued on page 16)



(Continued from page 15)

However, it was decided to keep going right through until daybreak Monday, to maximise the chances of all who called to enter our logbook.

At 0351z, Monday June 20th, the last station, UY7QF, was worked by Stan EI6DX (pictured above) on EU059. In 75 hours of operating time as MSØINT/P & MSØINT, we managed to make 11,496 QSO's.

Although the end of transmissions had ceased, we were not without drama as we packed up and descended the steep road back to Village Bay. We had taken two bikes with us.

Unfortunately, Ramon EA3OR fell off one of the bikes on the way down and sustained an injury. It wasn't until the expedition was over, it transpired he had broken his hand.

With also nearly capsizing in the tender at Monachs, you could say Ramon had an eventful journey!

There is only one logical target for MSØINT next year subject to substantial fund raising, and weather/sea conditions permitting.

It's a little further west than Hirta, St Kilda. I'm sure you can guess where our thoughts have turned to!

QSL cards for MSØINT and MSØINT/P go via MOURX.



Deutschland-Diplom (DLD) Rules

The DLD Award is an official award of the German Amateur Radio Club (DARC) which is available to all licensed radio amateurs and short wave listeners (SWL). The names of new award holders will be published in the DARC magazine "CQ DL".

All members of DARC and its associated club VFDB and club stations of both organizations are issued with a District Location Code (DOK).

To qualify for DLD, applicants must submit QSL cards from licensed radio amateurs showing a certain number of DOKs worked or - for SWLs- heard.

If an applicant has changed his or her call sign, e.g., because their license class has changed, but remains in the same country, then DOKs worked under the previous call sign will continue to count for credit towards DLD.

a) DLD Award Classes and Modes

1. DLD is issued separately for each amateur band.
2. DLD is issued in different classes on each band as follows:
DLD 100, DLD 200, DLD 300, DLD 400, DLD 500 (with lapel badge),
DLD 600, DLD 700, DLD 800, DLD 900
and DLD 1000 (with engraved badge of honor).
3. For SWLs, the awards are known as DLD-SWL 100, DLD-SWL 200 etc. up to DLD-SWL 1000.
4. All DLD Awards may be issued for mixed modes, or may be endorsed for single mode operation providing that is supported by QSL cards.

b) Conditions of Issue

1. All modes permitted by the applicant's license may be used.
2. The DLD Award will be issued initially when the applicant submits evidence of confirmed contacts with 100 different DOKs on a single band. For each additional 100 DOKs on the same band, the applicant may apply for the next class of DLD. Applicants may skip awards if they wish, i. e., it is not necessary to apply for a separate award for each 100 DOKs worked.
3. A DOK will only count if the station worked or heard is located in the Federal Republic of Germany at the time of the contact. Stations have only one DOK each and must only give out the DOK under which they are registered with DARC QSL Bureau.
Special Event DOKs will be published in „CQ DL“.
4. There will be a charge for the issue of the DLD Awards. Detail of charges will be published from time to time in „CQ DL“ and payment should be included with the application, or sent to the DARC in the form of a bank giro transfer.

Deutscher Amateur-Radio-Club e.V.
DLD-Diplome
Lindenallee 4
34225 Baunatal
Germany

c) Applications for DLD:

All valid DOKs are listed in the official DOK List. This list, which may also be used as an application form, is obtainable from DARC Publication.

It is recommended that you use a separate list for each band.

A computer generated list will be accepted providing it uses the same format as the application form issued by DARC.

All applications must be verified by the applicant's local club or by an official Award Manager before forwarding to the DARC-HQ.

The DLD Award will be issued once the appropriate fee is received.

DLD 100 - 200 and 600 - 900 each	€0.00 or \$10.00
DLD 300 - 500 (includes lapel pin) each	€3.00 or \$13.00
DLD 1000 (includes engraved lapel pin)	€6.00 or \$16.00

<http://www.darc.de/referate/dx/diplome/dld/en/>

Shannon Aeradio

By Tom EI3AL

On the morning of 13 January 1966, sole responsibility for Aeronautical Communications on the Eastern side of the North Atlantic was transferred to Ireland.

Prior to that date communications with Transatlantic flights was shared with the U.K. Communications Station at Birdlip. Since 1966, Communications in that part of the ICAO North Atlantic (NAT) Region known as the Shanwick Oceanic Air-traffic Control Area, has been provided solely by Shannon Aeradio, Radio callsign EIP.

The Shanwick area is an area of the North Atlantic bounded by a line from 45 degrees North, 08 degrees West to 45N 30W, to 61N 30W, to 61N 10W, to 56N 10W, to 54N 15W, to 49N 15W, to 48N 08W, to 45N 08W.

Shannon Aeradio, also known as Shanwick Radio, has been in operation from its present site since October 1936. The receiving station is located at Ballygirreen, Co. Clare and the transmitting station is located a few miles away at Urlanmore. The station is an Aeronautical ground station forming part of an International H.F. network which provides air/ground communications for airtraffic control purposes. The other Aeronautical stations in the network are located at Gander in Newfoundland, Reykjavik in Iceland, New York and Santa Maria in the Azores.

H.F. Communications

The air/ground communications service is provided on the following five families of H.F. frequencies:

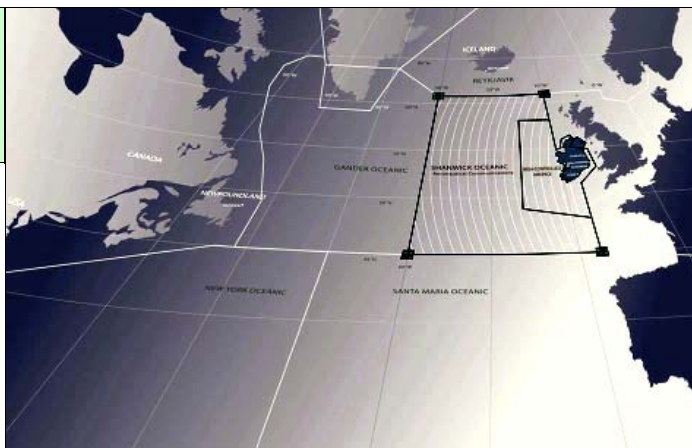
H.F. Family	Frequencies (kHz)				
A	3016	5598	8906		13306
B	2899	5616	8864		13291
C	2872	5649	8879	11336	13306
D	2971	4675	8891	11279	13291
F	3476	6622	8831		13291
Common					17946

Notes

1. Frequency 13306 kHz is common to family A and C.
2. Frequency 13291 kHz is common to families B, D and F.
3. The transmission mode on all frequencies is J3E.
4. Family A is used for flights on Southerly routes, family D is used for Northerly routes, family C is used for European registered Aircraft and family B is used for Aircraft registered in Canada/U.S.

V.H.F. Communications

Shannon Aeradio also operates two general purpose VHF Channels on 127.9 and 124.175 MHz. The transmitters and receivers for these frequencies are located at Truskmore, Co. Sligo, at Woodcock Hill, Co. Clare and at Mt. Gabriel near Schull Co. Cork. Dedicated Speech and Control lines link the remote sites with Ballygirreen.



Weather Broadcasts

Meteorological information for approximately 60 European Airports is broadcast continuously by Shannon Aeradio on the following frequencies:

3413 kHz 5505 kHz 8957 kHz 13264 kHz

The mode of transmission is J3E.

The 3, 5 and 8 MHz frequencies are used at night while 5, 8 and 13 MHz are used during the day.

Weather information received from the Meteorological Office Computer via landline is automatically decoded and converted into a synthesised voice which is then broadcast.

The weather data decoding equipment also prepares a continuous loop broadcast of actual weather conditions at 12 French, Irish and U.K. Airports.

This information is transmitted as speech via landline to a VHF Transmitter operating on 127.0 MHz located at Dublin Airport.

Search and Rescue

Shannon Aeradio operates on frequencies 2182 kHz, 3023 kHz and 5680 kHz for search and rescue purposes.

Equipment

Aerials in use at Shannon Aeradio include horizontally polarised Log-periodic, Omni-directional and Spiracone High/Low Angle aerials at Ballygirreen.

Vertically-polarised log-periodic, Omnidirectional and Broad-band Dipoles at Urlanmore.

Transmitters in use are S.P.T. 5kw. P.E.P. Single sideband solid state with one 4CX10,000 tube used in the Power Amplifier stage and Thales Solid-State 5KW.

The transmitters have antenna switching capability and are connected to the eighteen aerials via a Delta Aerial Matching Panel.

The transmitters are controlled from Ballygirreen by means of P.C. remote control units with selection of channel, mode, power-on/off and mark via modem pairs, landlines and microwave link.

The receiving station at Ballygirreen is equipped with Thales 1000 channel/tuneable receivers with selection of 4 aerials per receiver.

The receive antennae are matched to the receivers by multicouplers which can feed up to twenty-four individual receivers.

Tom O'Sullivan EI3AL

Qualifying for EI's First DXCC on 2 Metres

By Tom Cocking EI4DQ



After 22 years of DX hunting on 144MHz I finally made DXCC in 2009 but it took me another 2 years just to receive the required 100 cards. My DXCC certificate (number 61) arrived in June 2011. To date I have 125 DXCC entities worked on 2m but only 120 confirmed. Trying to get the cards is almost as hard as trying to get a new entity. I've just joined log book of the world so maybe I can get a few that way also.

I actively started 144MHz DXing in 1987 using Sporadic E, Meteor Scatter, Aurora and Tropo. However, the maximum amount of DXCCs via these modes from EI is only about 60 to 62 if you are lucky and I managed to work 60 DXCCs. In 1992. I became interested in EME when our club EI7M made the first ever EME QSO from EI with Dave W5UN.

Jerry EI6BT was on the key at the time, which makes Jerry the first EI operator on EME from EI and that's when the bug bit me and I then decided to use EME to hunt for the 40 more DXCC entities required.

Going the EME route meant a complete new station which was to be almost all homebrew. At the time, I did not realise the amount of work I was letting myself in for!

A new mast had to be built and the first EME aerials I built were 4 x 13 element NBS type Yagis.

My first EME QSO was with KB8RQ in Ohio and after that the country count started to increase. I changed these antennas after about 2 years for 4 x 12 element homebrew DL6WU types. Unfortunately, these antennas were later destroyed in a storm.

I rebuilt them but one year later they got destroyed in another storm. I then changed them for 4 x 15 element X polarity DJ9BY antennas. They stayed up for a few years but these also got destroyed. My homemade rotator started up on its own, while I was out and it wrapped my antennas and cable around my mast. I had no limit switch in circuit aaaargh!!

I then changed them for 4 x 11 element DJ9BV types and these also got destroyed by another storm. Lighting also took out my rigs, computer, preamps, cable, and almost EI4DQ.

I then put up 4 x 10 element DK7ZB type antennas and had these up for a few years until I changed them for my present antennas, 4 x 11 element YU7EF types.

Over the years during my country hunting on 144MHz I have made and installed 7 sets of 4 x groups of antennas i.e. a total of 28 antennas. I've blown at least 24 mgf1302 GaAsFets and been electrocuted once.

I have been hit by lightning three times (yes three), twice in the shack and once on an ESB pole, just my luck!

If you need a lighting rod for your station just give me a call, EME is real fun hi, hi.

Some of my best QSOs included working KB8RQ for my first EME QSO, also VK3CY, ZL3TY, JI1ZCG and W5UN on both SSB and CW.

I have even had a few pile ups during my early years on EME. A few stations have such large antenna systems they can cause the S meter to hit S3, or more and I've even seen S5.

I also have 48 US states worked on 144MHz, just waiting for missing KH and ND.

I made Worked All Continents all cw in the year 2000.

My DXCC on 144MHz is for mixed mode, using CW, SSB, and JT65B modes.

EME is one of the most exciting modes the radio amateur can use and gives the amateur a means of working any DXCC on 144MHz or higher that could be worked on HF.

OK, a bit more work is needed, i.e. tracking the moon etc, but that's all part of the fun.

If you intend to hunt for DXCC on 144MHz you have to be 100% committed, my family are always saying that I should be committed hi. That means making sure you catch all the new DXpeditions. I have often spent days just calling a new DXCC station but I have also worked a new DXCC on the first call. That DXpedition station may be on when you have moon at 0300 but you have to put in the time and work and hope the XYL does not complain.

The weather also plays a big part as a group of 4x11 element Yagis have a large wind capture area and some of the storms we can get here in EI are not good for a load of aluminium sticking up in the sky. But don't let that put you off,. Some stations use 2 x antennas with great results and they is also at least one 2 Yagi DXCC holder on 144MHz.

On top of all that there are the neighbours who think "who is that nut who keeps looking up at the moon at all hours of the day and night".

Don't forget the moon itself, which at times can give you that wanted DX station, or can completely mess up your signals or the DX signals.

EME signals can become polarity twisted (Faraday rotation), your horizontally transmitted signal could end up vertically polarized at the DX station or vice versa, with the result that you hear him, he doesn't hear you, or he hears you ,you don't hear him. That's why lots of stations run X polarity antennas ie horizontal/vertical.

My rigs on 144MHz are IC910H, 2 x TS711E, FT920, home-made transverters for 144MHz and 70MHz, homemade cavity preamps, homemade direction tracker, homemade 144MHz amplifiers and my homemade rotator has a 100 of lbs of torque and a 500 to 1 ratio.

Transmit and receive cables are 7/8" Helix.

So what's next?

I think its about time for a change of frequency to 50, 70 or 1296MHz.

I started DXing on 50MHz when it was first made available to Els many years ago, but even my 0.5watt output from home-made Meon transverter caused TVI to my neighbours and my own TV which were all on VHF Band 11 so I had to abandon 6m. But now with all TV channels on UHF, or about to go UHF, I am now TVI free on 6m. so I have now started DXing on that band. Since starting on 6m in April this year, my DXCC total is already up to 45. I would be lucky if I got 5 new ones a year on 144MHz except that in 2009 and 2010 I made 20 new DXCC contacts as a lot of DXpeditions were active during this time period and I was lucky to nab them.

Have a look at my website at www.qsl.net/EI4DQ

Stations Worked

3A (Monaco)	3A/DL8YHR	01/03/2010	00:22
3B8 (Mauritius)	3B8EME	15/05/2010	10:12
3D2 (Fiji)	3D2RS	29/09/2010	11:28
3DA (Swaziland)	3DAOHL	24/03/2007	12:20
3V (Tunisia)	3V8SS	11/12/2005	01:16
3X (Guinea)	3X5A	28/11/2007	00:30
3Y (Peter I I.)	3YØX	17/02/2006	04:32
4P-4S (Sri Lanka)	4S7CCG	01/12/2006	17:34
5B (Cyprus)	5B8AD	23/02/2005	22:51
5N-5O (Nigeria)	5NØEME	28/03/2009	18:29
5R-5S (Madagascar)	5R8EM	25/09/2008	06:35
5V (Togo)	5V7CC	26/04/2011	10:40
5Y-5Z (Kenya)	5Z4EME	02/04/2009	21:41
7P (Lesotho)	7P8EME	20/09/11	00:10
7T-7Y (Algeria)	7X2ARA	28/11/2010	01:14
8P (Barbados)	8P8MS	12/11/11	00:08
8Q (Maldives)	8Q7QQ	24/03/2010	14:16
9A (Croatia)	YU2KDE	20/07/1987	18:27
9H (Malta)	9H1PA	22/01/2000	23:00
9K (Kuwait)	9K2YM	18/02/2008	18:24
A2 (Botswana)	A25OB	07/06/2007	08:42
A4 (Oman)	A43DLH	09/11/2008	22:12
A6 (United Arab Emirat)	A6/RV6LNA	08/09/2006	21:16
A7 (Qatar)	A71AW	11/08/2006	23:00
BY,BT (China)	BD4SY	31/10/2009	18:17
C3 (Andorra)	C37DXU	22/07/2009	18:30
C5 (The Gambia)	C56EME	11/02/2011	20:44
CA-CE (Chile)	CE2/DK2ZF	01/11/2010	10:25
CEØ (Easter I.)	CEØY/DK2ZF	05/10/2010	15:42
CN (Morocco)	CN8ST	18/07/1993	18:47
CT (Portugal)	CT1WW	13/08/1987	10:00
CT3 (Madeira Is.)	CT3/SV8CS	31/10/2005	11:10
CU (Azores)	CU2E	11/06/2007	16:22
D4 (Cape Verde)	D44TD	06/08/2007	09:50
DA-DL (Fed. Rep. of Germa)	DF4CS	20/07/1987	18:22
DM, Y2-9 (German Dem. Rep.)	Y23RD	10/06/1989	16:33
DU-DZ (Philippines)	DZ1JP	11/03/2006	16:06
E7 (Bosnia-Herzegovina)	T93O	07/06/2006	17:50
EA6-EH6 (Balearic Is.)	EA6VQ	16/04/1994	19:30
EA8-EH8 (Canary Is.)	EA8XS	19/07/1986	10:50
EA9-EH9 (Ceuta & Melilla)	EB9OL	18/07/1993	19:30
EA-EH (Spain)	EA1EBJ/P	12/08/1987	15:59
EL-EJ (Ireland)	EJ4IDX	20/07/1987	18:47
ER (Moldovia)	ERØUB	08/05/2011	18:26
ES (Estonia)	ES1RF	19/11/2002	04:03
ET (Ethiopia)	ET3AA	13/04/2008	17:00
EU, EV, EW (Belarus)	EV5M	10/08/2006	22:56
F (France)	F6CIS	12/08/1987	15:06
FG (Guadeloupe)	FG4KH	07/01/2011	20:02
FM (Martinique)	FM5CS	07/04/2006	22:37
FY (French Guiana)	FY/DL2NUD	26/02/2010	22:44
G, GX (England)	G3XKT/P	15/08/1987	13:40

GD, GT (Isle of Man)	GD4AAA	05/06/1991	17:06
GI, GN (Northern Ireland)	GI4OWA	27/08/1987	23:15
GJ, GH (Jersey)	GJ4ICD	28/08/1987	19:06
GM, GS (Scotland)	GM4JJJ	19/01/2000	20:30
GU, GP (Guernsey)	GU1WDT	16/08/1987	17:33
GW, GC (Wales)	GW1SXN	21/07/1987	17:45
HA, HG (Hungary)	HA1WD	20/07/1987	16:19
HB (Switzerland)	HB9CRQ	06/02/1993	20:00
HBØ (Liechtenstein)	HBØ/HB9QQ	12/08/1994	20:00
HI (Dominican Republic)	HI3TEJ	23/10/2005	02:00
HL (South Korea)	HL4GHT	18/03/2008	19:44
HS (Thailand)	HS2JFW	21/04/2010	17:15
I (Italy)	I4XCC	21/07/1987	18:22
IS, IM (Sardinia)	ISØDZH	16/06/2003	16:36
J7 (Dominica)	J79DI	30/11/2006	20:58
JA-JS (Japan)	JL1ZCG	20/03/1994	13:00
JW (Svalbard)	JWØBY	06/06/1995	19:00
JX (Jan Mayen)	JX7DFA	23/01/1995	07:30
K,W,N, AA-AK (USA)	KB8RQ	02/01/1992	21:27
KH2 (Guam)	KG6DX	19/11/2005	23:22
KL7 (Alaska)	KL7FB	19/04/1994	22:14
KP4 (Puerto Rico)	WP4G	04/03/1995	17:00
LA-LN (Norway)	LA3BO	12/08/1991	09:00
LO-LW (Argentina)	LU7DZ	22/06/1996	20:00
LX (Luxembourg)	LX2PA	10/05/1992	16:15
LY (Lithuania)	LY2SA	17/11/1998	01:33
LZ (Bulgaria)	LZ2PP	17/06/1989	18:59
OA-OC (Peru)	OA4TT	19/05/2010	21:12
OE (Austria)	OE5JFL	30/10/1994	06:26
OF-OI (Finland)	OH7PI	26/03/1994	23:15
OHØ (Aland Is.)	OH9O/OHØ	10/06/2004	13:40
OK-OL (Czech Republic)	OK1MS	28/06/1992	07:00
OK-OM (Czechoslovakia)	OK1KT	11/08/1987	03:00
OM (Slovak Republic)	OM3ALE	08/06/1993	08:22
ON-OT (Belgium)	ON4KST	28/08/1987	20:15
OY (Faroe Is.)	OY/SMØKAK	14/08/1988	00:00
OX (Greenland)	OX4OK	22/09/11	13:59
OZ (Denmark)	OZ4MM	09/01/1993	00:30
PA-PI (Netherlands)	PAØJMV	13/08/1987	10:28
PJ2 (Curacao)	PJ2/PE1L	15/04/2011	21:40
PJ2, 4, 9 (Bonaire, Curacao (N	PJ4EME	08/06/2007	09:58
PJ4 (Bonaire)	PJ4X	07/04/2011	19:58
PJ7 (Sint Maarten)	PJ7EME	26/06/2011	10:00
PP-PY (Brazil)	PY2SRB	11/11/2005	00:41
S5 (Slovenia)	YU3UR	21/07/1987	18:29
SA-SM (Sweden)	SM5MIX	28/07/1992	15:00
SN-SR (Poland)	SP9HWY	28/05/1987	16:49
SV5 (Dodecanese)	SV5BYR	08/03/2006	19:20
SV9 (Crete)	SV9GPV	15/08/2007	15:40
SV-SZ (Greece)	SV1BTR	14/12/1994	19:00
T7 (San Marino)	T7OA	21/04/2010	15:58
TF (Iceland)	G4ODA/TF/P	31/07/1993	23:30
TK (Corsica)	TK5EP	19/11/2002	03:33
TZ (Mali)	TZ6NS	27/11/2006	21:22
UA2 (Kaliningrad)	UZ2FWA	11/08/1992	17:40
UA-UI1,3,4,6, (Eu Russia)	RA3YCR	31/01/1994	00:38
UA-UI8,9,Ø,RA (As. Russia)	UA9FAD	26/03/1994	23:30
UJ-UM (Uzbekistan)	UK/DL9LBH	16/10/2008	20:14
UN-UQ (Kazakhstan)	UN7GK	31/10/2009	18:43
UR-UZ, EM-EØ (Ukraine)	UT5ER	04/09/1994	13:40
V5 (Namibia)	V5/KT6Q	09/01/2009	21:35
VE, VO, VY (Canada)	VE7BQH	10/05/1992	00:00
VK (Australia)	VK3CY	10/04/2000	11:00
VK9X (Christmas I.)	VK9XMO	17/09/2005	22:08
VS6, VR2 (Hong Kong)	VR2KW	08/06/2008	11:27
XA-XI (Mexico)	XE2AT	09/11/2005	22:49
YL (Latvia)	UQ2GMD	08/07/1986	20:27
YO-YR (Romania)	YO2IS	22/06/1992	18:48
YT-YU, YZ (Serbia)	YU7CV	20/07/1987	18:24
ZB2 (Gibraltar)	ZB3B	05/06/2009	12:47
ZK1 (S. Cook Is.)	E51EME	01/04/2009	23:39
ZL-ZM (New Zealand)	ZL3TY	18/03/2005	03:16
ZR-ZU (South Africa)	ZS6ALE	17/06/1994	19:31



Excerpts from the HX files

A Look at ATV with Pat Fitzpatrick EI2HX - Excerpt 018

Hello and welcome to extract 018 of the HX Files.

In this issue we look at a 20 watt transmitter with a built in receiver.

This project would be a unit that would be, not to make little of it, a spare transmitter and receiver, and instead of it being left at home, it was to be brought with the main portable transceiver (photo 1) just in case anything happened to the main transmitter or receiver.



It would be setup as a transmitter, so if needed it could be used straight away. The receiver could be switched on while the TX was on, but as they have their own aerial sockets, I could monitor the TX signal without an aerial being connected to the receive socket.

There was a plan A or B at the start, I had thought of plan B of making it a transceiver and by simply adding a coaxial relay, TX/RX switch, a couple of phono sockets and patch leads it could be done. But I wanted to make this spare as a backup transmitter and to keep it as such, so I will carry on and build it as plan A and leave plan B for some time in the future.

The case for this project started life as a 100 watt 2m amplifier, and no, it was not converted to 23cms, it was however converted to junk by its previous owner.

I did not ask how he let all the smoke out, but I was told that it was beyond repair, so as the whole amplifier was a large heat sink and would be very handy to have, a deal was done and it was placed into the stores, and there the amp rested for a couple of years awaiting a renaissance. (Wow that was deep, it must be Christmas).

The first thing I did was to remove the old circuit board and switches, (I forgot to take a photo).

With that done, the original front and rear panels were used to mark out the holes for



the new panels, including a new bottom one. But before any cutting out was to be done to the panels I had to place the other parts on the heat sink to give me an idea on where to drill to attach the amp, transmitter and the receiver. In photo 2 you can see the front panel as a blank on the top, and on the bottom with the holes for the various switches, led's and a couple of carrying handles that would also act as a guard to protect the front.



In photo 3 you can see the parts laid out in their final position with some of the wiring done, the amp top right and the 50mw driver on the left, the receiver is on the bottom right, also seen is some connecting patch leads. The amp has some pre drilled holes in its own mounting plate and that with the bonding of the amp to the larger heat sink; the amp was finally attached by marking and drilling straight through the heat sink and using some stainless steel nuts and bolts.

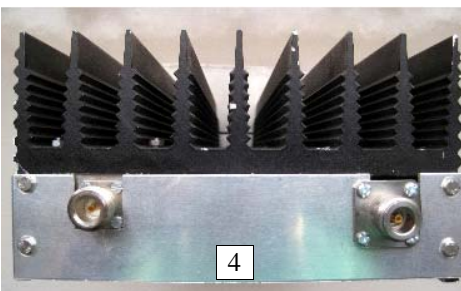


Photo 4 shows the back panel with the amp N type socket on the left, you may

notice that the two N sockets are different, one been the fitted socket on the amp and the other one a panel mount N to SMA.

I was not going to remove the N type fitting from the amp and attach it to the panel via a small lead or adaptor. So not wanting to remove the N type, a couple of small pieces of the panel was cut out so it would fit around the sockets, and as I had not got the harder files to work on the steel, I can make a new and better rear panel.

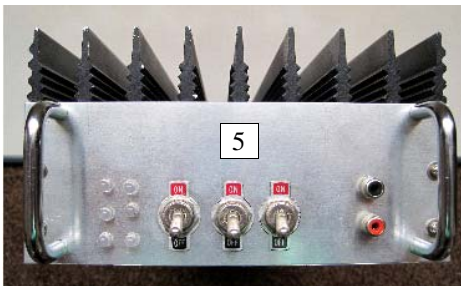


Photo 5 is a picture of the almost finished front panel; the 3 switches are for the 20 watt amp on/off, the receiver, and the DC on/off.

The switches and LED's will be marked out by the labelling machine when I find it.

The 6 LED's are used for the following: the DC power, amp on/off, TX on/off, RX on/off.

The amp has a feature that has a DC monitor voltage that can also be used to indicate if the amp is on so I will use that one as well, and not ruling out a time in the future that the unit could be turned into a transceiver I had a spare led for displaying the relay.

In photo 5 the finished front can be seen installed on the heat sink, the keen (Hungary) eye amongst you may have noticed that the LED's seem to white, but when the voltage is applied to them some of them light red and the rest green.

That is all for this Xtract of the HX Files, and indeed for 2011.

I would like to thank you for the kind words when I met you at the rallies over the year, so with that, I wish you a very Happy Christmas, and a prosperous, and P45 free 2012.

May all your signals be P5.

73
Pat.

New SDR ATV Repeater

South Dublin Radio Club is in the process of installing a new television repeater with coverage over the greater Dublin area. The repeater, which is located on the three rock mountain, will transmit on 2390MHz and receive signal in on 1249MHz. While not on the air yet, initial tests have proved successful with perfect pictures received 60 miles away at the EI2ATR Cavan repeater site. At these frequencies trees, buildings and hills can significantly block the signal so a repeater higher than the entire city will help overcome natural obstructions.

Some predicted coverage maps have been produced. These should be taken with a 'pinch of salt' as in reality there needs to be nothing in the way at further ranges. South Dublin city should have a quite strong signal, with usable signal inside the M50 and beyond in North County Dublin and Blanchardstown.

It is expected coverage in Tallaght and Celbridge will not be as predicted due to a nearby hill blocking line of sight.

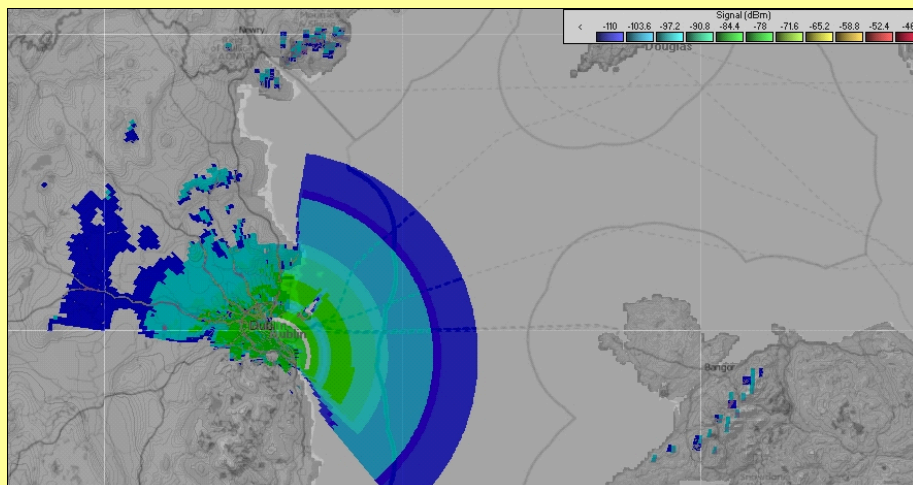
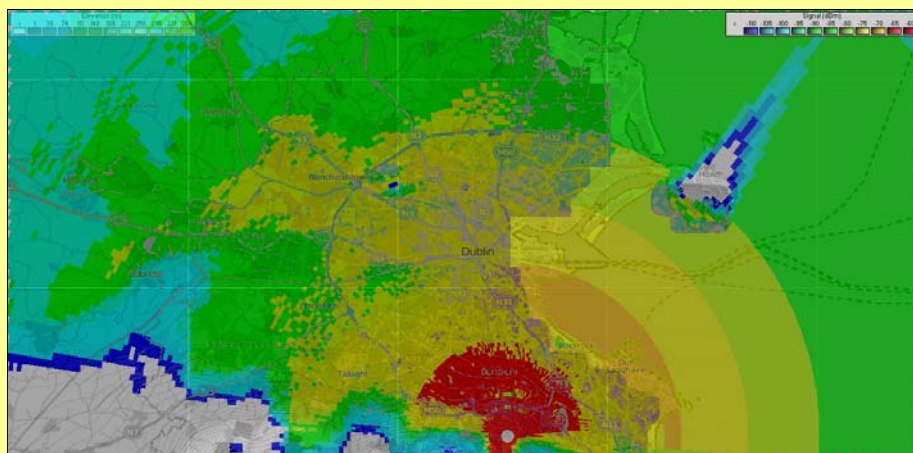
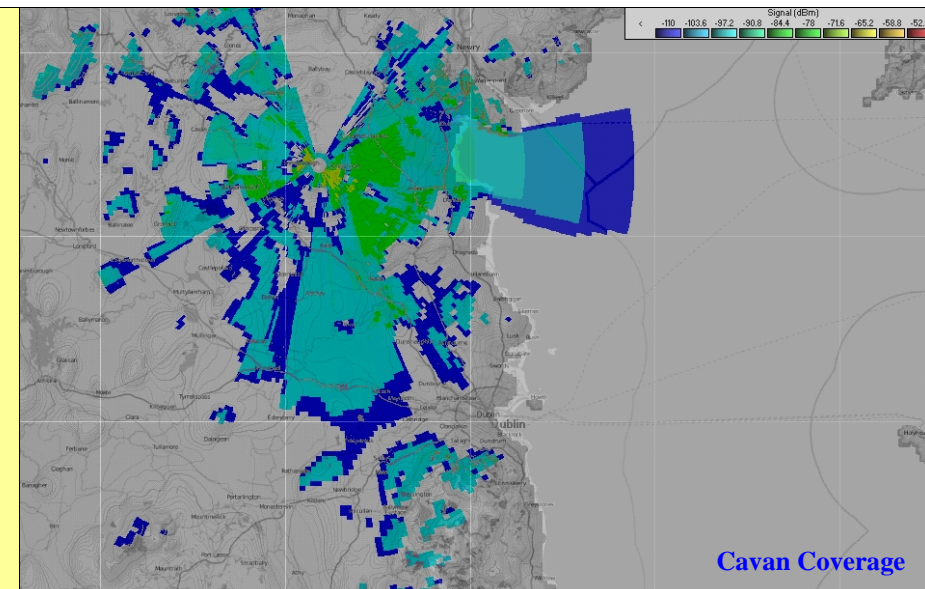
The repeater will be linked by radio to the existing TV repeater system currently operating in Co Cavan. This repeater currently transmits on 1276.5MHz, 2370 MHz and 10.040MHz and gives good coverage of Cavan/Louth/Meath Area.

To save on wasting energy the Cavan repeater does not transmit continuously. A receiver listens on 144.725MHz FM for a DTMF tone of *1 (STAR ONE) to be sent. When the repeater hears this tone it switches on it's testcard and transmitter for 10 minutes. Talk Back is on 144.750. One way to check coverage is to listen for it's 70cm ident on 430.975 and the input on 438.975 PL 88.5.

The new Dublin repeater will have a similar trigger system, and details will be provided in due course.

To help the average 'black box operator' operate the TV system South Dublin Radio Club will be buying the required antennas, receivers and transmitters in bulk. As the radio club is in coverage the system will be demonstrated at the club every Tuesday night, to show what is possible and to explain how to get on air. As coverage will be spotty due to tall buildings we suggest others not run out and buy equipment.

The club will provide complete systems on loan to confirm a suitable signal be-



fore purchasing anything. Great efforts have been placed on strong coverage, low cost receive equipment and low cost transmitters. We hope this will generate lots of activity on the band in the greater Dublin and Cavan areas. Included are expected coverage maps. Red, yellow and green show strong signal, while blue is weaker. Grey indicates no coverage expected. Also included is coverage of the Cavan ATV repeater which is already on air.

For many people in the North East this repeater is stronger, and if you can access either repeater, then it is possible to work both linked repeaters.

The club plan on having a stand at the phoenix rally in February 2011 to show what is needed and demonstrate the system live.

More details will be released as equipment and coverage is tested.
<http://www.iatc.ie> for more details.



Contest Corner

by IRTS Contest Manager Thos Caffrey EI2JD

Results: 2m Counties Contest, Autumn 2011

Call Sign	Valid QSOs	Counties	Total Score	Location
(a) High Power Portable				
EI EI2KC/P, Anthony Murphy	45	16	2,832	MEA
EI EI2SBC/P, Shannon Basin R C op: EI8IU	37	16	2,832	LEI
EI2NCR/P, Skerries R C op: EI2HX	29	9	891	DUB
(b) Low Power Portable				
EI EI7GY/P, Joe Ryan	42	17	3,655	LOA
EI7GEB/P, David Morgan	34	11	1,573	CAV
OEI 2I0MFB/P, Jamie Nelson	25	7	413	FER
(c) High Power Fixed				
EI EI9ES, Peter Morrison	17	8	528	DUB
EI7GM, Paul Kearney	12	7	315	DUB
(d) Low Power Fixed				
EI EI7T, Tipperary ARG op: EI2IT	33	15	1,920	TIP
EI7DAR, Dundalk ARS op: EI2JD	28	11	1,342	LOU
(e) FM Only				
OEI G14SZW/P, Seamus Keenan	35	19	2,983	ARM
EI EI4IP/P, Sean Kennedy	15	7	350	MEA
EI3FFB, Eamonn Kavanagh	14	8	280	TIP

Check Logs: - EI3JZ, EI7JG, EI9O, MI0RRE

EI **Award Winner : Leading EI Station**
 OEI **Award Winner : Leading station outside EI**

Welcome to the final edition for 2011. Seasons greetings to all our readers and may you all have a great contesting year in 2012.

Support for IRTS contests has been mixed this past year and I urge clubs and groups and individuals to have a serious look at taking part in one or more of the field days and in the 2m counties contests.

The next big one is the 80m counties contest on January 2nd and this one runs from 1400 to 1700.

Please come on and give a call.

The big one this coming year will be the CQ-IR Contest on St. Patrick's Day to mark the 80th anniversary of the IRTS. This is really more of a QSO party than a contest and with conditions improving all the time, it should be a great event.

Please put the date in your diary. Interest by EIs in international contests is always improving and the EI records in all sections are regularly being broken. For example it looks like up to 10 new EI records have been set in the recent CQWW SSB contest.

Congratulations to all involved. Hope to work you all on January 2nd on 80m.

73
de Thos EI2JD

Results: SSB Field Day 2011

Call Sign	QSOs	Multipliers	Points
Open Section			
** 1 EI7DAR/P, Dundalk ARS ops: EI2JD, EI3KE	379	81	121,743
2 EI7T/P, Tipperary ARG ops: EI7IG, EI3ENB	81		62,700
Restricted Section:			
** 1 EI1C/P, Cork RC ops: EI5GM, EI9FBB	633	102	225,012
2 EI3Z/P, Shannon Basin RC ops: EI9HX, EI3HA, EI6IB, EI6GGB, EI8IU, EI5GUB, EI4CF, EI5GVB	520	50	108,850
3 EI2KA/P, Tim McKnight	216	47	37,412

** = Award Winner



EJ0PL on Great Blasket Island for IOTA 2011

EJ0PL – EI0PL

Short story about the Basket Experience 2010/2011

In 2010 Adam EI5JQ, Jurek SQ7JT and Ark SP6ICW decided to take part in RSGB IOTA contest from the Great Blasket Island, EU-007. We used the /P portable callsign because we did not know about EJ that day! 3 inverted “V”s for 80/40/20 was our antenna system. ICOM 756 PRO2 was the rig with a 400w linear. It was our first time on the island and operation was more like “holiday style”. Ark SP6ICW was not active that year but he decided to apply for EI callsign just after the contest.

In 2011 we came back to the Blaskets once again for IOTA Contest. The same location, same rig but stronger team and better antenna. We obtained a call-sign EJ0PL. Adam EI5JQ – the Team - leader built 6-band Hexbeam for operation from the island. On Friday, just before the contest, a group of 5 operators (EI4JZ, EI5JQ, SQ7JT, SQ7NNM, SP9UUC) arrived at the island. 500kg of equipment was carried and installed near the Post Office ruins on the Great Blasket where last radio signal was transmitted years ago. The radio shack was located in the largest tent. Later in the evening of the same day first contacts were made on 80m. After midnight 20m band was still open and we logged a lot of stations from North America. Hexbeam was working well. For 80/40m we had inverted “V”

On Saturday morning, a few hours before the contest, the station was active on 18MHz working large numbers of Japan stations. Our QTH on the island had a good entrance to Asia. Signals from JA were amazing.

Ark EI9KC joined the team just before the contest on Saturday. During main performance from the island (IOTA Contest) the station was active on 80/40/20/15/10m bands giving unique EU-007 multipliers to stations all over the World. EJ0PL was active almost 24 hours during the competition. Operation was mainly SSB but a number of CW QSOs were made as well. When all the contest smoke cleared EJ0PL was still QRV on the bands as DXpedition from EU-007.

A few weeks after IOTA Contest EJ0PL team decided to open a Radio Club for contesting and DXpeditions. We obtained the call-sign EI0PL. At the moment “Papa Lima” Radio Club is located near Naas in Co. Kildare. We enjoy operations on the bands during various contests.

There are some plans for the next year activity. In April 2012 we would like to activate EU-103 Saltee’s and in the summer once again we are going back to the Blaskets for IOTA Contest 2012. But this time not to the Great Blasket itself. If possible we’ll try to operate from the Beginish Island. It’s a small island located between the Great Blasket and the mainland. We hope to get better signals from Caribbean! See you on the air during our activities! Stay tuned till the next time!

Vy 73! Ark EI9KC



Jurek EI/SQ7JT/P and Adam EI5JQ/P on the Great Blasket in 2010



Installing 6 band Hexbeam



EJ0PL radio room (tent)



From Dublin to the Boggeragh Mountains

Remote Control Station

By Dave EI6AL

Moving from Enniskerry to Dun Laoghaire in mid 2010 was a very positive decision in almost all respects, but it did bring one disadvantage - no space for antenna.

Having lived in Enniskerry for over 30 years, and having been licensed since 1966, I had got used to the luxury of space for antenna. Not huge space, but enough to play around with a variety of dipoles, verticals and beams. The new house in Dun Laoghaire was in a location that for a number of reasons meant no possibility of any antenna whatever, so time to look at alternatives.

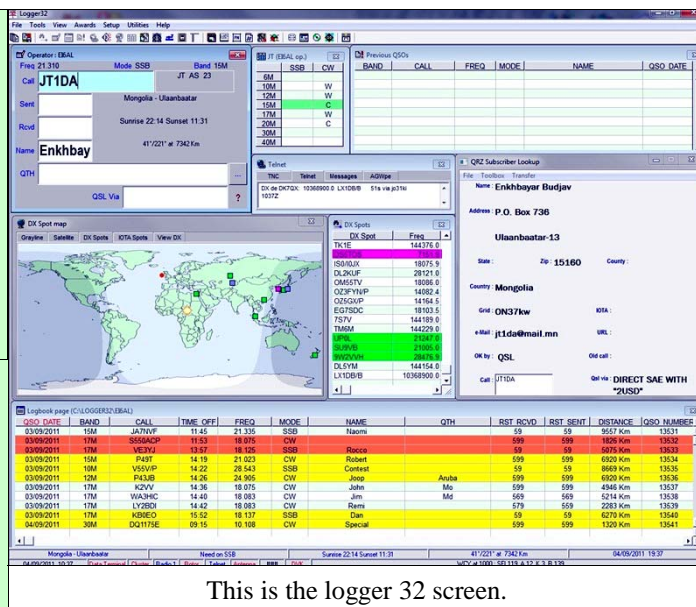
The obvious solution was remote operation, and I looked long and hard at Ham Radio Deluxe as a possibility. Downloading the software lead to two conclusions - I was not totally happy with the switch from "real" equipment controls to simulated screen controls, and also had a number of concerns about using Skype as the VOIP option for audio. The system that overcame both these concerns was Remoterig, manufactured by Microbit in Sweden. But there was a further and far more difficult problem to overcome - where to locate the remote end of the system.

The solution arose through a meeting with John Hickey EI3BF in Cullen, Co Cork. I had known John for many years and was well aware that if anyone would know of possible sites, John would. It turned out that John had also been looking at remote control options and had come to much the same conclusions on HRD and VOIP as I had, so we decided on a collaborative effort.

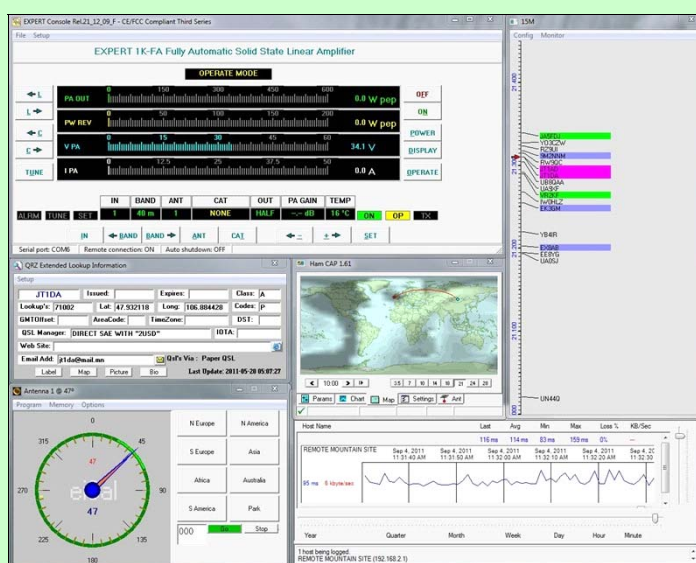
Neither of us were experts in networks or broadband protocols, so it was a good opportunity for us to learn by each others mistakes. John knew of a site in the Boggeragh Mountains at an elevation of 400m with power available, with reasonable access by a 4WD vehicle and with an existing equipment hut.

The only drawback was no broadband access, so a solution had to be found using a combination of broadband with a final 3G link to the site.

The first stage was to programme up two Remoterig RRC-1258 units to work back to back via an ethernet cable, with the control head of a Kenwood TS480 connected to the local unit and the transceiver to the remote unit. This was quite straightforward once the basic concepts of IP's and Ports was understood and the necessary cables put together. The tricky part was replacing the fixed ethernet link cable with a combination of broadband and 3G.



This is the logger 32 screen.



This screen is part remote information part general information. Top left is the Amp control screen. With this I have full control of amp power settings, manual tuning if necessary, monitor SWR, amp temperature etc.

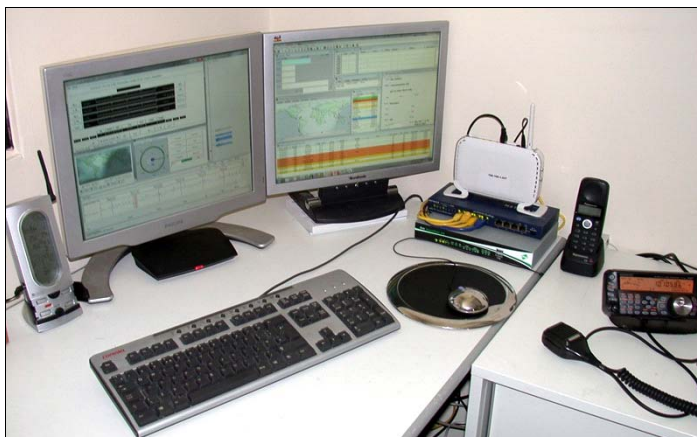
To the right is additional cluster information - clicking on any of the displayed stations will instantly set up the TS480, amp and antenna to the correct band and frequency.

Mid left is additional QRZ info on the worked station.

Mid screen is a propagation map which auto sets for band in use, time, antenna in use and power in use.

Lower left is the antenna rotator control, and lower right is the graph monitoring latency time in Ms for the link to the hill, updated every second.

Having done a lot of reading on the web, I came across an Irish Company, BB Electronics in Galway. They are the European distributors for a whole range of products that focus on broadband connectivity and solutions. Their suggestion was to use a Digi DR Router at the control end, and a Digi WR Router at the remote end. The WR Router has provision for a 3G Sim card as the primary source for connection, and the units together allow the setting up of a VPN, or Virtual Private Network, which overcomes potential problems in port blocking and VOIP pro-



Local Control. This shows the two monitor screens, the TS480 head. The main router is on the desk, above it is an ethernet switch and above that is a netgear router used purely for wireless internet coverage of the home QTH as there is no wireless facility in the main router.



Remote Setup. This is where it all happens. Top left is the 3G router, beside it is an SWR meter used for local tests. Lower left is the rotator control unit, sitting on top of that is the local ethernet switch and on top of that is the ethernet/RS232 server for power amp control. In the middle on the shelf is the TS480 transceiver, and on top of that is the heart of the system - the remoterig terminal. To the right is the power amp.



Remote Hut. This gives some indication of the site itself, looking southeast. This is the photo that I use on QRZ.com and during many QSO I have been asked "is this where you live?".....

tol blocking by routers used by the broadband and 3G providers.

Having checked the available options for the 3G service, where coverage in the wilds of West Cork was the main consideration, I settled for 3 as the network provider, with a data Sim offering up to 10G per month on a basic plan. BB Electronics gave a lot of support in setting up the routers, and eventually the link was working at the home QTH, with control in one room and the rig and dummy load in another, linked via the 3G network.

The remoterig units also permit the use of two local/remote RS232 ports, one of which I used for CAT control of the transceiver via Logger32 software on the PC. The other port was used for control of a Prosistel Antenna rotator, which conveniently has an RS232 option on the rotator control unit. For PC control of the antenna I used software provided by ARSVCOM.

Next stage was to shift all the equipment to the remote site, some 300km from the home QTH. The rotator and tower had already been erected, with a Cushcraft X7 triband Yagi for 20, 15 and 10, again thanks to John and his local knowledge and contacts, everything was connected up and a totally unexpected problem arose - no 3G signal. I had assumed that with the elevated site this would not have been an issue, but in hindsight it was obvious a bog on top of a mountain left little option for direct line of sight to a cell, or for any reflection.

The solution meant the erection of a high gain directional 3G antenna on the roof of the hut. Once that had been done we had a signal and everything worked.

Now it was down to a lot of testing and tweaking. Fortunately the remote interface and router are fully programmable over the internet so adjustments from the home QTH are straightforward enough (unless, as I inevitable did, you change the IP of the remote unit by mistake, losing all contact and forcing yet another visit to the site with the laptop).

The main problem in remote operation, particularly if using 3G as part of the link, is latency - the delay inherent in such links. Most of my operation is on CW, and fortunately the Remoterig units have a built-in facility for overcoming system delays by sending the CW as data packets that are reassembled at the remote end before transmission. This can cope with latency up to about 250ms. There are a number of parameters in the Remoterig units that can be adjusted to cope, such as packet size, buffer size, buffer delay etc, and eventually I was able to send up to 30wpm provided the latency remained below 200ms. The most important information on the PC (which has now expanded to two screens to cope with the amount of information on display) is a ping graph which constantly displays latency, and which has a red line at 200ms to warn me of potential interrupts to transmission. Average latency on the link is 120ms, high but manageable.

Another small issue was the tendency of the router to require a

(Continued on page 26)

(Continued from page 24)

re-boot if there was any interrupt in the 3G service. This happened a couple of times -another 600km each time just to flick a switch. That was sorted with a time clock that powers down everything for a few minutes in the small hours of each morning.

Next came the addition of an Optibeam rotary dipole for 40 and 30m, followed by a 3 Element Yagi for the WARC bands.

This raised a further problem - remote antenna selection.

I could remotely select up to two antenna on the TS480, now I had three. The answer was the installation of an SPE Expert Amplifier, which not only allowed an increase in Tx power to the authorised limit, but also provides automatic band switching through a frequency sense circuit, automatic selection of up to four antenna pre-programmed per band, and an automatic ATU.

The only problem was the necessity to have remote monitoring of the amplifier at the home QTH in case of problems or the occasional reset after power interrupts, and also to monitor power output, temperature, antenna SWR etc.

As I had already used the two RS232 ports on the Remoterig units, it meant installing a small ethernet to RS232 server at the remote site and the corresponding software at the home QTH, plus another learning curve in getting the correct port settings to avoid conflicts.

So finally everything is up and running. DX is being worked, and signal reports so far have been excellent as have reports on voice quality. There are still a few minor issues to resolve but the basic system is fully operational. There was also a mast failure during a recent storm which left the antenna leaning at a 45 degree angle.

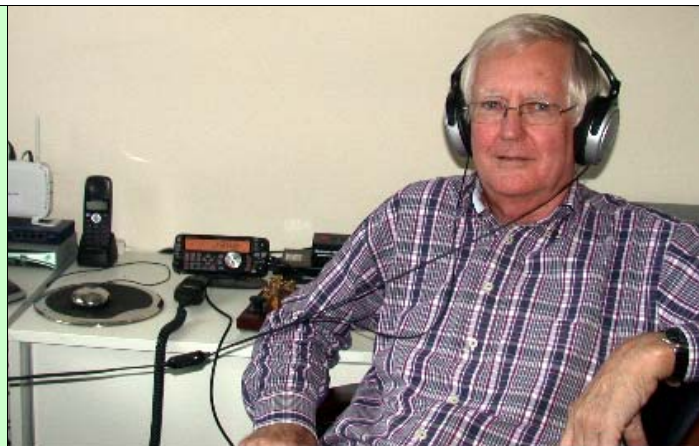
The original 2 inch galvanised pole had bent and has now been replaced by a solid 2 inch steel rod which should take care of future storms, although as the site looks out over West Cork to the Atlantic I wouldn't put a bet on that.

But having spent so much time in getting everything set up, there is huge satisfaction in working DX from a site 300km away, even if it does mean a 600km round trip if anything goes wrong.

I also took the opportunity when re-erecting the antenna of replacing the X7 and the WARC antenna with an Optibeam 11/5 five band Yagi, which meant I only needed two antenna to cover all HF bands 40m to 10m. Its a rare day when there is no wind blowing in the Boggerah mountains and the fewer antenna on the tower the better.

Future plans include a small Yagi for 6m, a long wire for 80m. And also a remote camera at some stage which will be aimed at the antenna. At least I can then watch it keel over.

I suspect that the use of remote operation will increase. I have kept ComReg advised of the remote operation and they have confirmed that they have no objection to such operation in EI once they are advised of the QTH of both home and remote locations. They also issued a revised licence showing my home



EI6AL. This is where I spend my time when I'm not travelling the N7/N8 to Cork.

address and authorising the use of the equipment at the remote location, which must be specified on the licence.

This permission obviously assumes no RF links are used to control the remote station. Whilst there are no real issues when using remote in the same country as the home QTH, its use in countries other than the home QTH raise some licencing issues that will have to be addressed and I note with interest that this topic was raised at the recent conference of the IARU.

I also note that the RSGB have concerns that remote operation should not be confused with permissions granted under CEPT. I have worked a number of stations in the US using remote stations in Switzerland controlled over the internet.

Some use the HB prefix, some do not. This is one area where I think the use of the country prefix where the antenna is located should be mandatory, as they are under the CEPT regulations.

I suspect that if such regulations are passed we will see many more stations in rare DX entities appearing on air, controlled from remote and more populated countries.

My personal view is that this would not be a bad thing, although it does raise a query in the area of contest operation concerning a possible perceived unfairness in the advantage gained through the attraction of a rare multiplier as a prefix to the home call.

Another area that may well require future regulation is the use of high site high power stations that are constructed purely for commercial considerations, being rented in a form of time share for remote access.

However, I certainly hold the view that operation within the country of licence raises few if any problems, and apart from the satisfaction of overcoming technical issues in getting such stations on air, it can also be the solution to lack of antenna space at the home QTH.

I can also see the attraction of reverse remote operation, activating the home QTH from anywhere in the world with nothing more than a remote head, an interface and access to the internet. Its an interesting field, and one that has a very interesting and challenging future.

Dave EI6AL

IRTS 80m Counties Contest

January 2nd 2012

Rules

1 General:

All entrants must be fully paid up members of the Irish Radio Transmitters Society.
This does not apply to stations outside EI.

2 Date and Time:

2.1 From 1400 to 1700 UTC on a date in early January (see Contest Calendar).

2.2 From 14:00 to 17:00 UTC on a date in June (see Contest Calendar).

3 Sections:

- 3.1 a) SSB only Fixed
b) SSB only portable – 100w max. SSB Field Day Restricted Section rules apply
c) SSB/CW fixed.
d) SSB/CW portable – 100w max. SSB Field Day Restricted Section rules apply
e) SWL – see Section 8 of General Rules

3.2 Whether portable or fixed, entrants must operate from a single location for the duration of the contest.

4 Modes and Frequencies:

4.1 SSB and CW. A station may be worked on both modes - except in the SSB Only sections.

4.2 Only one signal may be transmitted at a time.

4.3 QSOs with the same station on different modes must be separated by at least three other QSOs.

4.4 The IARU Region 1 Band Plan should be observed, and in addition:

- CW contacts should be made only in the recognised CW end of the band
- As this is a local contest, no operation should take place where the Band Plan indicates priority for intercontinental operation

4.5 Frequencies: CW 3510-3560; SSB 3600-3650 & 3700-3775

5 Exchange:

5.1 Exchange report, serial number (starting 001 for the first contact) and county e.g. 59001, Wicklow.

6 Special Rules for Counties Contests:

6.1 At the discretion of the Contest Manager, entries from stations with poor-quality signals (too wide, overdriven, distorted etc.) will not be eligible for any award and will be treated as check logs.

7 Scoring:

7.1 For entrants in EI/GI:

Any County in EI/GI 4 points

Contacts outside EI/GI 1 point

7.2 Entrants outside EI/GI:

Each contact with EI/GI 4 points

7.3 The final score is the total number of points multiplied by the total number of EI/GI counties worked. In the SSB/CW sections, counties only count

8 Documentation:

8.1 Submitted logs should be legible. Accepted formats are handwritten, typed, computer print, or ASCII text files on disk or by email.

8.2 A summary sheet should show:

- Station location.
- Section entered (One section only – do not leave blank).
- Final claimed score.
- Equipment used.
- Name(s) and callsign(s) of operator(s)

9 Awards:

9.1 An award will be made to the leading EI station in each section.

9.2 An award will be made to the leading station outside EI in each section.

10 Entries:

10.1 Entries, which must be received by the Contest Manager not more than 30 days after the event, should be sent to contestmanager@irts.ie
Entries being sent by post should be sent directly to the Contest Manager at QTHR.

T32C - Kiritimati - October 2011

by
Paul O'Kane EI5DI

The Five-Star DXers Association (FSDXA) is loosely based around the Chiltern DX Club in the UK. It was set up in 1998 to run DXpeditions in such a way that anyone, even those with only 100w to a dipole, could expect to have QSOs on several bands. Previous FSDXA operations included Spratly (1998), Comoros (2001), Rodrigues (2004) and Saint Brandon (2007). T32C was to be their first operation from the Pacific – Christmas Island, one of the many islands in the Republic of Kiribati which, itself, extends for some 2000 miles east to west.

Distances in the Pacific are vast!

Christmas Island, or Kiritimati as spelled locally ("ti" is pronounced as "s"), is 2000 km miles south of Hawaii and only 300 km north of the equator. It is the world's largest coral atoll, but with a maximum height of 3 metres. The population is around 5000, and the most substantial buildings are generally churches, with associated schools and markets.

The T32C expedition was planned to span four weekends, with a couple of extra days at each end in Hawaii – to assemble and brief the teams, and as contingency because there's only one return flight per week between Hawaii and Fiji, via Kiritimati. We had a total of 38 team members, including Dave EI9FBB and myself. Sixteen had signed up for the full term, meaning almost 5 weeks away from home, while another 11 would spend the first two weeks on the island, and a final 11 the second two weeks.

T32C was always going to be special – FSDXA had organised everything, all

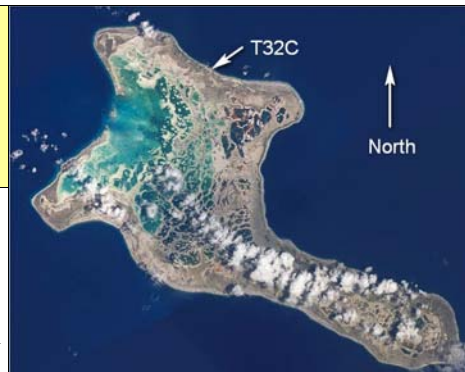
most of us had to do was turn up and operate. We would have the best of everything, all shipped in advance, 15 top-of-the-range Yaesu FTdx5000 rigs and Quadra amps, with generators to run them continuously, two pairs of phased verticals for 80m, two separate 4-squares for 40m and another for 30m, and Yagis and vertical arrays for the five bands from 20 to 10m. And then, with just three weeks to go, the container disappeared into a black hole in the Pacific. More specifically, it became marooned 3000 km west of Kiritimati.

Now, at best, we would have only what might be mediocre radios and whatever antennas could be carried as airline excess baggage. Yaesu UK had kindly lent us ten FT450D rigs – good enough, but perhaps not the first choice for a major DXpedition. We had hoped to beat a few DXpedition records and now there would be little chance. I suppose, like many team members, I had brief thoughts of mutiny – should I stay or should I go, should I smuggle in my K3?

Soon, like all the others else, I realised we would just have to make the best of it. At least I was spared the frantic last-minute re-planning so ably done by the management team.

No one dropped out. We arrived in Hawaii as planned, by Sunday 28th September, ready for the Tuesday flight. A couple of team members had travelled a week earlier to scour Hawaii and Christmas Island for necessary cable and equipment – and it's difficult to overemphasise how generous and helpful the local KH6 amateurs were. On Tuesday morning, the first 25 team members arrived at

Honolulu airport with 900 kilos of excess baggage – rigs, amps, computers, cable, filters, power supplies and Spiderbeam fibre-glass poles. This all cost a few dollars but only a small fraction of what it would have been on Ryanair! At least it was all accepted by Air Pacific. Now, finally, we could look forward to



some DXpedition operating.

The three-hour flight south to Kiritimati arrived one day later, on Wednesday – that's because we crossed the date line, which is anything but straight in that area. Our base was the Captain Cook Hotel, named after the gentleman who discovered the island on Christmas Eve 1777. The hotel is built from the remnants of the military barracks used by support teams for the UK and American nuclear tests of the 50s and 60s. It was basic but comfortable, and with good food – we often had fresh tuna steaks and lobster in the evenings, and even whole roast pig on a couple of occasions. No one starved, and no one got sick from the food.

The plan was to construct verticals and vertical dipoles right beside the sea – giving a low-angle path to North America, Europe and Asia, and to get all stations on the air, simultaneously, at midnight the following Friday. We missed this target by only 20 hours, mainly due to initial problems with power, computer support systems and inter-station QRM.

My first operating slot was 10m SSB, from 0400 to 12 noon (local time) on the Sunday, during the early stages of the Oceania Contest. The band opened to the States at 0730, with an instant pileup, and the first surprise – the radio was good! Even while operating simplex (no split) and exchanging serials, the pileups never became unmanageable and by noon I had 700 QSOs logged. That was really encouraging. The Oceania Contest was our first success. The previous multi-op multi-transmitter record was some 5 million points, and we ended up with over 50 million, helped considerably by good conditions on 10 metres. That record may well stand for a few sunspot cycles. After the contest, I found that the rigs were equally good on CW and considerably better, in terms of strong-signal handling, than the early FT2000s we had on Saint Brandon. For the first time on CW I operated without filters (thinking, wrongly, that the 450D had none – it has



DSP filtering) and soon realised that what others had been claiming for years was true – this way you hear more callers and it's easier to get full calls the first time. I'd say this probably increased my rates by 10%, and 75% of my QSOs were on CW. Another pleasant surprise, compared to earlier DXpeditions, was that no antennas needed to be turned (no Yagis). This made for relaxed operating, with no worries about when to beam to Japan or anywhere else – just work what you hear and get on with it.

The weather was hot and sticky most of the time, but with very little rain. We had some air conditioning in the shacks, but it wasn't always effective. There was the usual mix of tropical insects, some very small but with ferocious bites – if only in terms of how your arms and feet looked the next day, and I soon learned to cover up. It was nearly always windy, with the constant roar of waves crashing on the reef, which came right up to the beach with its the fine coral sand. One surprise was the almost complete absence of birds, particularly small ones. There were some that looked like seagulls, but they tended to fly only between trees (I never saw one on the ground) and made sounds exactly like cats fighting. Some said that the locals had eaten all the birds eggs a few years ago and, whatever the true story, we learned there were considerably more birds some twenty years ago. Being near the equator, days and nights are always 12 hours each. Evenings and nights were very pleasant. The days were hot, and any antenna work was usually done early, starting at 0630 or after 1500 local time. One team member collapsed with heat exhaustion after working in the mid-day sun for a couple of hours – that's a serious condition and needed the close attention of the team doctor for several hours.

Each of us, apart from the those engaged on support tasks (IT, power, inter-station QRM), was scheduled for two 4-hours operating slots in each 24-hour period, and could volunteer for a third if there was a chance of an opening. The slots were rotated to give an even mix of bands and times. Even so, there were repeated complaints about everyone else getting all the good slots. Very soon, one day merges into another, and all you're concerned about is getting fed and getting sleep between shifts. The busy slots are the best, it's better to have pileups than call CQ for hours into an empty band – and we all had our fair share of both.

The pileups can be intense at times, and quite intimidating. We all have to do whatever it takes to get a good rate in the circumstances, and there's nothing better than having previous experience, often gained from operating in major contests.

In DXpeditions like this, rate is one of the main priorities – we want to break records.

For us, this has to be tempered with the need to work Europeans. Christmas Island is easy from most of the North and South Americas, but much more difficult from Europe – with extreme distances, often over an auroral path. Europe was possible on many bands for only two or three hours each day, with guaranteed pileups. Scandinavian stations often appeared at times when no other Europeans could be heard – there really is something different about propagation from that area. There were few Japanese pileups, and activity from there seems very much lower than on previous FSDXA operations – even though it was an easy path. Various theories were proposed, perhaps related to the tsunamis and their nuclear power problems – we don't know for sure.

I like rate as much as anyone, but had to take the usual turns on 160m. One slot at dusk coincided with an opening to Europe and the UK, and I soon had a dozen or so logged. That was fun – my first ever real DX on 160m, with very weak signals and slow-speed CW. It taught me one thing, don't waste a second to complete a QSO. Callers should never repeat their call if the DX station got it right the first time. I was confident I had copied the callsign of one ON caller, and replied with the full call and the usual 5NN. Instead of "R", which would have been enough for me to log the QSO, I got a repeat of the callsign, but heard only the prefix before the signal disappeared. With no way of knowing whether this was a correction or a confirmation., the result was no QSO in spite of repeated attempts to get confirmation.

Early on, even with our late start, we knew we were in with a chance of breaking some records. The daily QSO statistics showed that, after the flurry of excite-



Dave EI9FBB (extreme right)

ment over the first few days with over 11,000 QSOs per day, our rate of decline was lower than expected. The maths were simple, we had 24 operating days and the record (VP6DX – Ducie Island 2008) was 183,000 QSOs, so we needed to maintain a running average of approximately 7600 QSOs daily. There's nothing like the realistic prospect of breaking a few records to motivate DXpedition operators and, in the end, we did it with days to spare, and went on to log 30,000 more. T32C was the first DXpedition with over 200,000 QSOs, the first with 100,000 on CW, and the first to have 100,000 QSOs with North America.

Any gripes? Hardly any – one was from callers persistently demanding PSK. Since ARRL recognises only CW, Phone (AM, FM, SSB) and Data (all data modes) for DXCC purposes, I believe DXpeditions should do the same and not count RTTY and PSK as separate band/mode slots. Perhaps the same argument should apply to 10m FM?

DXpeditioning is an expensive business, and I could have bought a fancy rig or amplifier for what this trip cost me. However, pileups can be addictive and I think I'll soon have to start saving for the next one. FSDXA couldn't host an operation like this without support from sponsors, and I'm pleased to acknowledge the generous donations from IRTS and South Dublin Radio Club, and from the many individual Irish DXers, North and South – full details at T32C.com.

T32C really was special – we had lots of fun, we finished with a stack of DXpedition records, and I'm proud to have been on the team.

Paul EI5DI
November 2011

Members Advertisements

For Sale:

Collectors item :- "The Rhythm Method of Morse tuition" by G3HSC on 2 LP records.

Beginners course to advanced course, play at 33, 45, and 78 RPM.

€20 collected or €30 to include postage.

Bill. 021-4384314 or

fahy963@gmail.com

Wanted:

ERA Microreader CW Decoder or similar decoder.

Leo 01-2809382 anytime.

For Sale:

MFJ-904 Deluxe Travel Tuner, 150 watts, 80 to 10 metres, c/w instructions and box.€100

Uniden UBC 92 XLT scanner with "close call", charger, instructions, box. ...€100

Watson Super Searcher, 10MHz – 3GHz RF Finder€65

JIM M-75 receive amplifier,

BNC connections, boxed.€65

All items in excellent condition, photos available via e-mail.

Bill, 021-4384314 or

fahy963@gmail.com

DX Code Of Conduct



- I will listen, and listen, and then listen again before calling.
- I will only call if I can copy the DX station properly.
- I will not trust the DX cluster and will be sure of the DX station's call sign before calling.
- I will not interfere with the DX station nor anyone calling and will never tune up on the DX frequency or in the QSX slot.
- I will wait for the DX station to end a contact before I call.
- I will always send my full call sign.
- I will call and then listen for a reasonable interval. I will not call continuously.
- I will not transmit when the DX operator calls another call sign, not mine.
- I will not transmit when the DX operator queries a call sign not like mine.
- I will not transmit when the DX station requests geographic areas other than mine.
- When the DX operator calls me, I will not repeat my call sign unless I think he has copied it incorrectly.
- I will be thankful if and when I do make a contact.
- I will respect my fellow hams and conduct myself so as to earn their respect.

www.dx-code.org

Lagan Valley Rally 2012 Hillsborough - 3rd March 2012

<http://gi0dvu.co.uk/lisburnrally.aspx>.

Contest Calendar

All Times UTC

January 2012

2	Mon 1400 - Mon 1700	IRTS 80m Counties Contest	CW/SSB
14-15	Sat 0000 - Sun 2359	Mongolian DX Contest	RTTY
21-22	Sat 1200 - Sun 1159	Hungarian DX Contest	CW/SSB
21-22	Sat 1200 - Sun 1200	UK DX RTTY Contest	RTTY
27-29	Fri 2200 - Sun 2200	CQWW 160m Contest	CW
28-29	Sat 1300 - Sun 1300	UBA DX Contest	SSB

February 2012

11-12	Sat 0000 - Sun 2359	CQWW RTTY WPX Contest	RTTY
11-12	Sat 1200 - Sat 1200	Dutch PACC Contest	CW/SSB
18-19	Sat 0000 - Sun 2359	ARRL International Contest	CW
24-26	Fri 2200 - Sun 2200	CQWW 160m Contest	SSB
25-26	Sat 1300 - Sun 1300	UBA DX Contest	CW

March 2012

17-18	Sat 1200 - Sun 1159	CQIR Ireland Calling	CW/SSB
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Phoenix Amateur Radio Club

Annual Radio Rally

Sunday 12th February 2011

Coolmine Community School,

Blanchardstown, Dublin 15

Doors open for traders at 0900

Doors open to public at 1100

Admission €5.00

Refreshments and Bring and Buy.

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To book tables or for information

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Tony at 0872439997 or Tom at 01-8211043

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Please note: I can still be contacted at jimbobtraynor@utvinternet.com

Lough Erne Amateur Radio Club

Annual Rally

**The Share Holiday Village,
Lisnaskea, County Fermanagh
BT92 0EQ**

Sunday 1st April 2012

Bring & Buy, Caravan Park,
access from Lough Erne/Shannon Waterway
Food and parking on site

Doors open 1130

Further details from Iain: 028 66326693 iain@learc.eu
<http://www.lougherneradioclub.co.uk/>

Dayton's 2012 Theme:

"Internationally Connected"

Planners of the Dayton Hamvention® have chosen "Internationally Connected" as the show's theme for 2012.

According to the Dayton Amateur Radio Association, which sponsors the three-day event each May, this year's choice was made to recognize the many hams who travel to Dayton from all over the world and to acknowledge "the important role that ham radio plays in promoting international goodwill."

DARA has set up a new committee specifically to work with foreign guests. The 2012 Hamvention will be held from May 18-20.

The show brings about 20,000 people a year to the Dayton area and generates some \$10 million in revenue for the region.

Bangor and District ARS Summer Rally.

Saturday 7th July 2012 at 1130

Donaghadee Community Centre,
Donaghadee, County Down

More information on
www.bdars.com

Contact Bill GI4AAM
for further details:
Tel: 028 9181 6707

Email:
bill.langtry@btinternet.com



Irish Radio Transmitters Society

80th

**Annual General Meeting
Annual Dinner & Rally**

Hosted by
Dundalk Amateur Radio Society
at The Fairways Hotel, Dundalk

April 21/22nd 2012

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thoscaffrey@hotmail.com **087-2953256**



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Alinco DX-SR8E. Latest HF Rig from Alinco. New	€699.00
Ameritron 811 HXCE. 800w Amplifier. As new.	€899.00
Antron 99 Fibreglass Base Antenna, 10/12m	€89.00
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BHI DSPKR 10w amplified DSP noise cancelling speaker.....	€135.00
Diamond SX-400 SWR Meter. 2m/70cms. 200w	€85.00
Diawa PS304 Mk2. 30 Amp 30A silent Power Supply. Mint Condx ..	€49.00
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Icom IC-756PRO. HF + 6m. Auto ATU. Boxed, mint.....	€1,299.00
Icom IC-91E. Dual Band handheld with D-Star fitted	€75.00
Icom ICR-71E. 0-30MHz. All Mode Classic Receiver.....	€99.00
Icom SP-23. Matching Speaker for IC-756 etc	€29.00
Icom ICR-7000. 0-2000MHz. All Mode Receiver	€599.00
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